

## PATENT ABSTRACTS OF JAPAN

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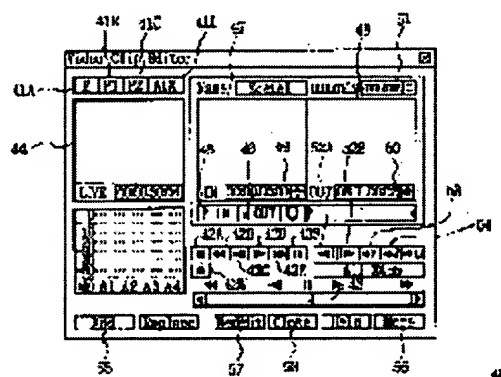
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## (54) EDITING LIST GENERATING DEVICE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To significantly improve efficiency generation of an editing list by showing the marks corresponding to the desired video special effect processes on a display means in the prescribed different display colors according to the types of the above processes when the editing list is generated.

**SOLUTION:** An operator can designate both in and out points of a video part that is registered and used as a clip by clipping an in-point designating button 45 and an out-point designating button 46 while confirming visually the images which are displayed within a live video display part 44. Then the images of designated in and out points are shown at the in and out point image display parts 47 and 48 respectively. At the same time, the time codes of in and to point images which are set on a video tape are shown at the in and out point time code display parts 49 and 50 respectively and the material length of a designated clip is shown at a duration display part 51.



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CLAIMS

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[Claim(s)]

[Claim 1] The edit list which specified the content of edit for connecting two or more registered image raw materials, and acquiring a desired edit image can be created. In the edit list listing device set up so that the image special effect processing concerned may be performed, as the mark corresponding to the image special effect processing for which it asks to the creation time of the edit list concerned is displayed on the request location of the predetermined part in the above-mentioned edit list The edit list listing device characterized by having a display means to display the predetermined screen for edit list creation for creating the above-mentioned edit list, and a display-control means to display the above-mentioned mark on the above-mentioned display means by different predetermined foreground color for every class concerned according to the class of the above-mentioned image special effect processing.

[Claim 2] The edit list listing device according to claim 1 characterized by what the above-mentioned foreground color of each above-mentioned mark for every above-mentioned class of the above-mentioned image special effect processing was selected for by the affiliated color.

[Claim 3] The above-mentioned display-control means is an edit list listing device according to claim 1 carried out [ displaying the above-mentioned corresponding mark on the above-mentioned display means by different predetermined aposematic coloration from the above-mentioned foreground color which corresponds in the above-mentioned predetermined part of the above-mentioned edit list about the above-mentioned image special effect processing in which ON setting out of the predetermined function mode was carried out, and ] as the description.

[Claim 4] The above-mentioned predetermined function mode is an edit list listing device according to claim 3 characterized by becoming in the key mode which displays each image based on the two above-mentioned image raw materials in piles.

[Claim 5] The edit list which specified the content of edit for connecting two or more registered image raw materials, and acquiring a desired edit image can be created. In the edit list listing device set up so that the image special effect processing concerned may be performed, as the mark corresponding to the image special effect processing for which it asks to the creation time of the above-mentioned edit list is displayed on the request location of the predetermined part in the above-mentioned edit list A display means to display the predetermined screen for edit list creation for creating the above-mentioned edit list, The edit list listing device characterized by having a display-control means to display a corresponding mark on the above-mentioned display means by different predetermined aposematic coloration from the usual foreground color about the above-mentioned image special effect processing in which ON setting out of the predetermined function mode was carried out.

[Claim 6] The above-mentioned predetermined function mode is an edit list listing device according to claim 5 characterized by becoming in the key mode which displays each image based on the two above-mentioned image raw materials in piles.

DETAILED DESCRIPTION

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## [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention is applied to the edit equipment made as [ create / the edit list which specified the content of edit for connecting two or more registered image raw materials about an edit list listing device, and acquiring a desired edit image ], and is suitable.

[0002]

[Description of the Prior Art] As conventionally shown in drawing 12 , as this kind of edit equipment on the edit list creation screen which becomes on a GUI (Graphical User Interface) screen A time scale 100 (time-axis), Video track 101A of \*\*\*\*\* 1, effect truck 101B, and 2nd video track 101C are displayed on this. The 1st and 2nd frame 102A according to the raw material length of an image raw material which wants by mouse actuation on the 1st and 2nd video track 101A and 101C, As the 102B is indicated by sequential so that it may continue on a time scale 100, there are some which were made as [ create / an edit list ].

[0003] And so that it may be located in the location with which the 1st and 2nd frames 101A and 101C lap on a time scale with this edit equipment By displaying the icon 103 according to the image special effect processing for which it asks on effect truck 101B It is made as [ set / it / so that it may switch as the 1st image raw material corresponding to 1st frame 102A, and the 2nd image raw material corresponding to 2nd frame 102B and the image special effect processing concerned may sometimes be performed ].

[0004]

[Problem(s) to be Solved by the Invention] By the way, generally image special effect can be divided into two kinds such as the thing (for example, wipe) of the transition system changed from the 1st image MV1 to 2nd another image MV2 like drawing 13 (A), and the thing (for example, picture Inn picture) of the animation system which displays 2nd another image MV2 temporarily to the 1st image MV1 like drawing 13 (B).

[0005] And the combination of the image which can be used differs -- each image special effect of these transition system and an animation system has the need of being time amount with the 2nd image MV1 shorter than the 1st image MV1, in the image special effect of for example, an animation system.

[0006] However, with the conventional edit equipment mentioned above, the display of any of a transition system and an animation system the image special effect corresponding to each icon 103 is, respectively is not made, but it is \*\*\*\*\* only to an operator's information.

[0007] For this reason, the problem which must choose the image special effect for which it asks again when there are no means which distinguish whether the image special effect corresponding to \*\*\*\*\* or its icon 103 can therefore be used for the error message shown in this edit equipment in the phase where the operator displayed the icon 103 on effect truck 101B and an error message is carried out, for example is \*\*\*\*\*.

[0008] There are some which were built so that the parameter value and the various function modes which were preceded and set up about image special effect for the purpose of raising an operator's user-friendliness as edit equipment furthermore mentioned above might be succeeded until it changes the setting out.

[0009] However, for whether it is set up about various function modes with such edit equipment, if not conscious of being unable to identify even if it sees the icon 103 displayed on effect truck 101B, but ON setting out of the various function modes being carried out, the problem which is it easy to mistake that equipment broke down is \*\*\*\*\* by being in the condition that an edit image does not expect. Therefore it is easy to \*\*\*\*\* to setting out, and especially the so-called key processing that piles up and displays two images is \*\*\*\*\*.

[0010] Therefore, in edit equipment, it is easily discriminable any of a transition system and an animation system the image special effect which it is going to use is, and if it can make it possible to distinguish easily whether ON setting out of the specific function mode is carried out about image

special effect processing, it will be thought that the working efficiency of creation of an edit list may be raised.

[0011] This invention was made in consideration of the above point, and tends to propose the edit list listing device which may raise the working efficiency of creation of an edit list on a target markedly.

[0012]

[Means for Solving the Problem] In order to solve this technical problem, it sets to this invention. In the edit list listing device set up so that the image special effect processing concerned may be performed, as an edit list can be created and the mark corresponding to the image special effect processing for which it asks to the creation time of the edit list concerned is displayed on the request location of the predetermined part in an edit list A display-control means to display a mark on a display means by different predetermined foreground color for every class concerned according to the class of image special effect processing was established.

[0013] As a result by this edit list listing device, the class of image special effect processing in which it corresponds based on the color of a mark can be distinguished in easy and an instant.

[0014] Moreover, in this invention, can create an edit list and it sets to the edit list listing device set up so that the image special effect processing concerned may be performed, as the mark corresponding to the image special effect processing for which it asks to the creation time of an edit list is displayed on the request location of the predetermined part in an edit list. A display-control means to display a corresponding mark on a display means by different predetermined aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the predetermined function mode was carried out was established.

[0015] As a result with this edit equipment, it can distinguish easily whether predetermined function mode is set up about image special effect processing in which it corresponds in an instant based on the color of the displayed mark.

[0016]

[Embodiment of the Invention] About a drawing, the gestalt of 1 operation of this invention is explained in full detail below.

[0017] (1) In the block diagram 1 of the edit equipment by the gestalt of this operation, 1 shows the edit equipment by the gestalt of this operation as a whole, and while it can register as a clip the request part of the image voice recorded on the video tape, it is made as [ incorporate / to a hard disk drive unit 2 / the video signal and sound signal of a clip for which it asks if needed ].

[0018] moreover, the edit list specified the content of edit for connecting each registered clip in the request condition with this edit equipment 1, and obtaining desired edit image voice -- it can create -- further -- this edit list that created -- therefore, it is made as [ record / edit processing is performed actually and / on a video tape / the edit image and the edit voice which were obtained ].

[0019] That is, this edit equipment 1 is constituted by connecting the main control section 3, the system control section 4, the image input section 5, the video output section 6, the digital image voice-input/output section 7, the image special effect processing section 8, the voice input/output / mixer section 9, and the disk control section 10 mutually through a control bus 11.

[0020] In this case, the main control section 3 displays a predetermined actuation screen (this is hereafter called the Maine screen) on a display 12 at the time of the first stage. Moreover, clip register mode is chosen by operating a mouse 13 in this condition, and the main control section 3 sends out the control command C1 according to this to the system control section 4, if the playback actuation instruction of one set of a video tape recorder 14A-14D is inputted out of two or more sets of the video tape recorders 14A-14D connected to the edit equipment 1 concerned.

[0021] The system control section 4 performs playback actuation of the video signal and sound signal which were recorded on the video tape by sending out a control signal S1 to the corresponding video tape recorders 14A-14D based on the control command C1 supplied.

[0022] As a result, from these video tape recorders 14A-14D, the analog video signal S2 and the analog sound signal S3, and digital video-signal S4 and the digital sound signal S5 are outputted, the analog video signal S2 and the analog sound signal S3 are given to the image input section 5, or the voice

input/output / mixer section 9, respectively, and digital video-signal S4 and the digital sound signal S5 are given to the digital image voice-input/output section 7.

[0023] Moreover, the system control section 4 makes either the analog video signal S2 and the analog sound signal S3 which were outputted from video tape recorders 14A-14D, or digital video-signal S4 and the digital sound signals S5 incorporate by controlling the image input section 5 or the voice input/output / mixer section 9, or the digital image voice-input/output sections 7 through a control bus 11 at this time.

[0024] When it is given to the image special effect processing section 8 as a digital video signal S6 and digital video-signal S4 is incorporated through the digital image voice-input/output section 7 after digital conversion of this was carried out in the image input section 5, when the analog video signal S2 was incorporated through the image input section 5 in this way, this is given to the image special effect processing section 8 as it is.

[0025] The image special effect processing section 8 sends out the digital video signal S6 and S4 which are supplied to the basis of control of the system control section 4 from the image input section 5 or the digital image voice-input/output section 7 to the main control section 3. The digital video signal S6 and the image based on S4 are displayed on the basis of control of the main control section 4 by the display 12 in this way in the predetermined location on the Maine screen at this time.

[0026] Moreover, when it is sent out to the loudspeaker which this does not illustrate from a voice input/output / mixer section 9 as it is when the analog sound signal S3 is incorporated at this time and the digital sound signal S5 is incorporated, after analogue conversion of this is carried out in a voice input/output / mixer section 9, it is sent out to a loudspeaker.

[0027] thereby with this edit equipment 1, it be make as [ register / associated data, such as a time code of that Inn point and an out point, and raw material length ( DEYURESHIYON ), / based on the voice output from the image and loudspeaker which be displayed on the display 12 / further / an operator can specify an image and an audio request part using a mouse 13 and a keyboard 15, and / by consider this as a clip / operator / into the main control section 3 ] .

[0028] Moreover, the main control section 3 sends out the control command C1 according to this to the system control section 4, when incorporation mode is beforehand chosen at this time.

[0029] The system control section 4 by sending out a control signal S1 to the corresponding video tape recorders 14A-14D based on the control command C1 supplied While making the video tape recorders 14A-14D concerned reproduce the image voice of the specified clip, the image input section 5, and the voice input/output / mixer section 9, By controlling either of the digital image voice-input/output sections 7 through a control bus 11 Either the analog video signal S2 and the analog sound signal S3 which are outputted from video tape recorders 14A-14D, or digital video-signal S4 and the digital sound signals S5 are made to incorporate.

[0030] When it is sent out to the disk control section 10 through the image special effect processing section 8 as a digital video signal S6 and digital video-signal S4 is incorporated through the digital image voice-input/output section 7 after digital conversion of this was carried out in the image input section 5, when the analog video signal S2 was incorporated through the image input section 5 as a result, this is sent out to the disk control section 10 as it is.

[0031] Moreover, when it is sent out to the disk control section 10 as a digital sound signal S7 and the digital sound signal S5 is incorporated through the digital image voice-input/output section 9 after digital conversion of this was carried out in a voice input/output / mixer section 9, when the analog sound signal S3 was incorporated through a voice input/output / mixer section 9 at this time, this is sent out to the direct disk control section 10.

[0032] And the disk control section 10 incorporates the digital video signal S6 and S4 which are given from the image special effect processing section 8 or the digital image voice-input/output section 7, and the digital sound signals S7 and S5 given from a voice input/output / mixer section 9, or the digital image voice-input/output section 7 one by one based on the command given through a control bus 11 from the system control section 4 at this time, and is made to record them on the address position as which these were given to the hard disk drive unit 2, and the hard disk was specified.

[0033] Thus, in this edit equipment 1, it is made as [ incorporate / to a hard disk drive unit 2 / it / the image voice of the specified clip is reproduced from a video tape, and ].

[0034] On the other hand, the main control section 3 will display the list of clips registered into the Maine screen currently displayed on the display 12, if a clip is registered as mentioned above.

[0035] And an operator can create the edit data which prescribed when which clip and which clip the content of \*\*\*\*\* would connect how using this Maine screen as an edit list. Moreover, an operator can check the edit image based on [ / in the middle of creation ] the edit list in the creation rear stirrup of an edit list, and edit voice.

[0036] In practice, the main control section 3 sends out the control command C1 according to this to the system control section 4, if the preview mode of the edit image voice based on [ / in the middle of creation ] the edit list in the creation rear stirrup of an edit list is chosen.

[0037] While the system control section 4 makes the video tape recorders 14A-14D concerned reproduce the image voice of the clip used for edit processing by sending out a control signal S1 to the video tape recorders 14A-14D which correspond if needed based on the control command C1 supplied. By controlling the disk control section 10 through a control bus 11 if needed, the image voice of the clip used for edit processing is reproduced from a hard disk drive unit 2.

[0038] As a result, from these video tape recorders 14A-14D, the analog video signal S2 and the analog sound signal S3, and digital video-signal S4 and the digital sound signal S5 of the specified clip are outputted, the analog video signal S2 and the analog sound signal S3 are given to the image input section 5, or the voice input/output / mixer section 9, respectively, and digital video-signal S4 and the digital sound signal S5 are given to the digital image voice-input/output section 7.

[0039] The system control section 4 makes either the analog video signal S2 and the analog sound signal S3 which were outputted from video tape recorders 14A-14D, or digital video-signal S4 and the digital sound signals S5 incorporate by controlling the image input section 5 or the voice input/output / mixer section 9, or the digital image voice-input/output sections 7 through a control bus 11 at this time.

[0040] When it is given to the image special effect processing section 8 as a digital video signal S6 and digital video-signal S4 is incorporated through the digital image voice-input/output section 7 after digital conversion of this was carried out in the image input section 5, when the analog video signal S2 was incorporated through the image input section 5 in this way, this is given to the image special effect processing section 8 as it is.

[0041] In the image special effect processing section 8, the special effect processing processing of the digital video signal S6 of each clip supplied to the basis of control of the system control section 4 and the S4 is changed into the condition of having been specified if needed. Moreover, the image special effect processing section 8 inserts image data given if needed from the main control section 4 at this time, such as a title alphabetic character and various GURATSUFUITSUKU, between the digital video signal S6 of each clip, and S4, or superimposes it on the digital video signal S6 and S4, and sends out the digital edit video signal S8 acquired in this way to the video output section 6.

[0042] The video output section 6 carries out analogue conversion of the digital edit video signal S8 supplied to the basis of control of the system control section 4, and sends out obtained edit video-signal S9 to a monitor 16.

[0043] The inside of the analog sound signal S3 outputted from video tape recorders 14A-14D on the other hand at this time, and the digital sound signal S5, When the analog sound signal S3 is incorporated through a voice input/output / mixer section 9 This is sent out to a loudspeaker as a post edit sound signal with which edit processing of mixing etc. was performed if needed in a voice input/output / mixer section 9. When the digital sound signal S5 is incorporated through the digital image voice-input/output section 7, after analogue conversion of this is carried out in a voice input/output / mixer section 9 and edit processing of mixing etc. is performed, it is sent out to a loudspeaker as an edit sound signal.

[0044] As a result, in this edit equipment 1, while the edit image based on edit video-signal S9 is displayed on a monitor 16, the edit voice based on an edit sound signal is outputted from a loudspeaker, and an operator can check the edit image based on an edit list, and edit voice in this way.

[0045] Furthermore, the main control section 3 sends out the control command C1 according to this to

the system control section 4, if a mouse 13 or a keyboard 15 is operated and the run command is inputted, after an edit list is created.

[0046] While the system control section 4 makes the video tape recorders 14A-14D concerned reproduce the image voice of the clip used for edit processing by sending out a control signal S1 to the video tape recorders 14A-14D which correspond if needed based on the control command C1 supplied. By controlling the disk control section 10 through a control bus 11 if needed, the image voice of the clip used for edit processing from a hard disk drive unit 2 is reproduced.

[0047] Like the time of the this result above-mentioned preview mode, the required digital video signal S6 of a clip and S4 are given to the image special effect processing section 8 from video tape recorders 14A-14D via the image input section 5 or the digital image voice-input/output section 7, or the required digital video signal S6 of a clip and S4 are given to it via the disk control section 10 from a hard disk drive unit 2.

[0048] Moreover, at this time, the analog sound signal S3 or the digital sound signal S5 of a required clip is given to a voice input/output / mixer section 9 via the direct or digital image voice-input/output section 7 from video tape recorders 14A-14D, or the digital sound signals S7 and S5 of a required clip are given to it via the disk control section 10 from a hard disk drive unit 2.

[0049] And the image special effect processing section 8 carries out special effect processing processing of the digital video signal S6 of each clip supplied to the basis of control of the system control section 4 like the time of above-mentioned preview mode, and the S4 if needed, and sends out the digital edit video signal S8 which becomes with the video signal of the edit image acquired in this way to the video output section 6.

[0050] The video output section 6 carries out analogue conversion of the digital edit video signal S8 supplied to the basis of control of the system control section 4, and sends out obtained edit video-signal S9 to the corresponding video tape recorders 14A-14D.

[0051] Moreover, at this time, a voice input/output / mixer section 9 performs edit processing of mixing etc. if needed to the analog sound signal S2 or the digital sound signals S5 and S7 of each clip which are supplied to the basis of control of the system control section like the time of above-mentioned preview mode, and sends out the edit sound signal S10 acquired in this way to the corresponding video tape recorders 14A-14D.

[0052] Video tape recorders 14A-14D record edit video-signal S9 supplied from these video output section 6, and the edit sound signal S10 supplied from a voice input/output / mixer section 9 on the location where the video tape was specified based on the control signal S1 given from the system control section 4.

[0053] thus, the edit list created with this edit equipment 1 -- therefore, it is made as [ record / at a video tape / on the condition that the image voice of the specified clip was specified / it / edit processing is carried out and ].

[0054] (2) the configuration of the main control section -- the main control section 3 here, as shown in drawing 2 CPU () [ Central Processing ] Unit20, ROM () [ Read Only ] Memory21, RAM () [ Random ] Access Memory22, the display-processing section 23, the title / graphic generation section 24, interface circuitries 25 and 26, and the SCSI (Small Computer System Interface) interface circuitry 28 the CPU bus 27 It minds, and by connecting, it is constituted, connects with a mouse 13 and a keyboard 15 respectively through each interface circuitries 25 and 26, and connects with the hard disk drive unit 17 through the SCSI interface circuitry 28.

[0055] In this case, by CPU's20 reading the image data in ROM21 if needed based on the program stored in ROM21, and giving this to a display 12 through the display process section 23 A figure, an alphabetic character, etc. which were inputted through the cursor and keyboard 15 which move in the inside of the Maine screen following the Maine screen and the various dialogs like the after-mentioned, and mouse actuation are displayed on a display 12. And the image and static image based on the digital video signal S6 and S4 which are given to the display process section 23 through a title / graphic generation section 24 from the image special effect processing section 8 are displayed on the predetermined location in the Maine screen.



[0056] Moreover, if the run command of predetermined processing is given through interface circuitries 25 and 26 by operating a mouse 13 and a keyboard 15, CPU20 Based on the program stored in ROM21, by sending out control command C1 to the system control section 4 if needed The video tape recorders 14A-14D which correspond through the system control section 4 concerned, The image I/O section 5, the video output section 6, the digital image voice-input/output section 7, the image special effect processing section 8, and various processings that it reaches a voice input/output / mixer section 9, or the disk control section 10 is made to perform predetermined actuation, and were mentioned above as the edit equipment 1 whole in this way are performed.

[0057] Furthermore, CPU20 controls a title / GURAFUTSUKU generation section 24 at the time of the need, makes the image data of a title alphabetic character or a graphic generate based on the program stored in ROM21, sends this out in the image special effect processing section 8, and is made as [ make / these title alphabetic character or a graphic / reflect in an edit image in this way ].

[0058] (3) the operating procedure in the Maine screen -- as for the actual top CPU 20, the power source was switched on here -- starting -- the time -- ROM21 -- storing -- having -- \*\*\*\* -- a program -- being based -- first -- drawing 3 -- being shown -- as -- Maine -- a screen -- 30 -- a display 12 -- displaying -- making .

[0059] Two or more carbon buttons 33A-33T for specifying the clip information-display section 32 for displaying two or more carbon buttons 31A-31Q for choosing the content of processing for which an operator asks, the list of each registered clips, etc., and the various processings in edit list creation time, and the edit list creation section 35 for creating an edit list are formed in this Maine screen 30.

[0060] And therefore, it can make it display a dialog (for this to be hereafter called a video clip edit dialog) 40 like drawing 4 in piles on the Maine screen 30 on this Maine screen 30 to click video clip edit carbon button 31K of a screen upper case.

[0061] In this case, in the video clip edit dialog 40, each video tape recorders 14A-14D are made to correspond to a left-hand side upper case, respectively, two or more indication of the source selection carbon buttons 41A-41D is given, and one set of the desired video tape recorder 14A-14D can be chosen by clicking any one of these source selection carbon buttons 41A-41D by mouse actuation.

[0062] And therefore, an operator can perform actuation according to the carbon buttons 42A-42G for video actuation chosen as the video tape recorders 14A-14D corresponding to the thing to display in the video clip edit dialog 40 concerned, and which shift and clicks those carbon buttons 42A-42G for video actuation, after choosing one of the source selection carbon buttons 14A-14D. In addition, \*\* can be performed to carry out drag actuation of the slider 43 in the video clip edit dialog 40, and, therefore, the video tape recorders 14A-14D which correspond similarly can be made to perform playback actuation. And when video tape recorders 14A-14D are made to perform playback actuation and gear change playback actuation at this time, the image reproduced from the video tape by the video tape recorders 14A-14D concerned is displayed in the live graphic display section 44 in this video clip edit dialog 40.

[0063] An operator can specify the Inn point and out point of an image part which it is therefore going to register into clicking the carbon button 45 for the Inn point assignment, or the carbon button 46 for out point assignment as a clip in this way, inspecting visually the image displayed in this live graphic display section 44. And the image of the Inn point specified at this time and an out point is displayed in the Inn stippling image display 47 or the out stippling image display 48, respectively.

[0064] Moreover, the time code in the video tape of each image specified as the Inn point or an out point at this time is displayed on the Inn point time code display 49 or the out point time code display 50, respectively, and the raw material length (DEYURESHIYON) of the specified clip is displayed on the DEYURESHIYON display 51.

[0065] In addition, therefore in the video clip edit dialog 40, the display image in the live graphic display section 44 can be moved to being able to make the forward direction or hard flow indicate the image therefore displayed on clicking the coma stepper buttons 52A and 52B in the live graphic display section 44 by coma delivery, and clicking the live image migration carbon buttons 53 and 54 to the Inn point or an out point.

[0066] And therefore, an operator can register the part from the Inn point of the image to an out point

into clicking the registration carbon button 55 as a clip, after specifying the Inn point and out point of a clip as mentioned above.

[0067] Associated data, such as a time code of the Inn point of that clip currently displayed on the display 12 at this time and an out point, and raw material length, a preservation location (inside of a video tape or a hard disk drive unit 2), is incorporated by RAM22 as a database. Moreover, associated data, such as a time code of the Inn point of the clip which carried out in this way and was registered, and an out point, and raw material length, is displayed in the clip information-display section 32 of the Maine screen 30 like drawing 5.

[0068] When incorporation mode has therefore been beforehand chosen as furthermore choosing MOABOTAN 56 of this time 40, for example, a video clip edit dialog, on the made setting-out screen with open Lycium chinense which is not illustrated, the data (for example, flag) which are incorporated [ voice / of this clip / image ] by the hard disk drive unit 2 as mentioned above, and express that the preservation location of that clip is in a hard disk drive unit 2 are stored in the location where it corresponds in a database.

[0069] incidentally it is incorporated by the hard disk drive unit 2 by order predetermined time (for example, 2 seconds) from the specified Inn point to an out point namely, -- with this edit equipment 1 at an excess rather than the range which had the video signal and sound signal of this clip specified at this time. Moreover, when link mode is beforehand chosen on this time, for example, an above-mentioned setting-out screen, while an image and voice link as data and are incorporated by the hard disk drive unit 2, it is incorporated by the hard disk drive unit 2 without linking an image and voice as data, when non link mode is chosen.

[0070] And in the video clip edit dialog 40, therefore, it can return to an initial state clicking the new edit carbon button 57, and, thereby, an operator can do sequential registration of other clips with the same procedure as \*\*\*\* after this. Moreover, therefore, it can close that this video clip edit dialog 40 clicks the closing carbon button 58.

[0071] On the other hand, an operator can create an edit list by the following approaches using the edit list creation section 35 of this Maine screen 30 in the condition ( drawing 5 ) that the list of clips registered into the clip information-display section 32 of the Maine screen 30 as mentioned above was displayed.

[0072] In this case, after doubling cursor with the stage of the clip of the request in the clip information-display section 32 by mouse actuation first, as the depression of the carbon button of a mouse 13 is carried out, one clip is specified, and after moving cursor to the request location in the 1st or 2nd video track 35C, and 35E by making time scale 35A of the edit list creation section 35 into an index with that condition, the carbon button of a mouse 13 is released.

[0073] As shown in drawing 6 as a result, the frames 60A-60D of die length according to the raw material length of the clip specified as mentioned above are displayed by making the location of the cursor at that time into a head in this the 1st or 2nd video track 35C, and 35E. moreover, when the image and voice of that clip are linked and registered at this time The 1st or 2nd video track 35C as which the frames 60A-60D were displayed, The frames 60A-60D displayed in the 1st or 2nd video track 35C, and 35E on 35D, the 1st corresponding or the 2nd audio track 35G, and 35H and the frames 61A-61D of the die length same on time scale 35A as the same location are displayed.

[0074] and an operator so that it may carry out by repeating the above actuation and may continue on time scale 35A to the time code (namely, -- a part for the time amount for which it asks) for which it asks from the time code ("00:00.00:00") which time scale 35A begins It is made to display Frames 60A-60D, and 61A-61D on the 1st or 2nd video track 35C and 35E and the 1st or 2nd audio track 35G and 35H one by one.

[0075] In this way here The 1st of the edit list display 35, or 2nd video track 35C, 35E and that Frames 60A-60D, and 61A-61D are displayed on the 1st or 2nd audio track 35G and 35H It means that the image of the clip corresponding to the frames 60A-60D, and 61A-61D is displayed on the time amount expressed with time scale 35A at the time of the output of edit image voice, or voice is outputted. Therefore, the edit list which comes [ voice / which is displayed by such actuation as an edit image, or is

outputted as edit voice / the clip image or voice ] to carry out a sequential convention can be created. [0076] moreover, in case it does in this way and an edit list is created, from an image to the image of the 2nd clip of the 1st clip to perform image special effect processing of a ton JISHIYON system [ to switch and sometimes perform image special effect processing ] [ namely, ] While displaying 1st frame 60A corresponding to the 1st clip to precede on one 1st or 2nd video track 35C and 35E The part on the backside [ the 1st frame 60A concerned ] and the part by the side of before [ the ] display 2nd frame 60B corresponding to the 2nd clip which carries out backward on the 2nd or 1st video track 35E of another side, and 35C so that the time code in time scale 35A may lap.

[0077] Then, selection effect carbon button 33R of the step in a screen is clicked. As a result, the icons (these are hereafter called an effect icon) 63A-63Y showing the content of various image special effect processings like drawing 7 which can be performed can display the predetermined dialog (this is hereafter called a selection effect dialog) 62 by which it was indicated by two or more on the Main screen 30.

[0078] in addition, in this selection effect dialog 62 While the various image special effect processings which can be performed are classified into some types ("Cut", "Dissolve", "Wipe", "2D", "Screen", "3D", and "PinP") Therefore the effect icons 63A-63Y of various image special effect processings of the type corresponding to clicking the tabs 64A-64G corresponding to the type for which each type is made to correspond, respectively and Tabs 64A-64G are formed, and it asks [ from ] while being these tabs 64A-64G It can replace with the effect icons 63A-63Y of each image special effect processing of the type currently displayed till then, and can be made to display in the selection effect dialog 62.

[0079] And after the operator displayed the effect icons 63A-63G of image special effect processing of the transition system for which it asks as mentioned above in the selection effect dialog, Move cursor on the effect icon 63A - 63G concerned, and the carbon button of a mouse 13 is pushed after this. The 1st and 2nd frame 60A [ in / for cursor / in the condition / effect truck 35D of the above-mentioned edit list creation section 35 ], 60B makes it move to the part which a time code overlaps on time scale 35A, and releases and (drag and drop) is made to carry out the carbon button of a mouse 13.

[0080] It is displayed on the condition of having been stuck on the location where the effect icons 63A-63Y to which it was dragged in the selection effect dialog 62 as a result moved the screen top to cursor and one, and were dropped.

[0081] By this On the other hand, the image of the clip corresponding to 1st frame 60A displayed on the 1st or 2nd video track 35C and 35E, The 2nd or 1st video track 35E of another side, Directions of the purport which should perform image special effect processing according to the effect icons 63A-63Y stuck as mentioned above in the connector part with the image of the clip corresponding to 2nd frame 60B displayed on 35C can be inputted.

[0082] Namely, on the other hand, for example in the middle of the image of the 1st clip, to perform image special effect processing of an animation system [ to perform image special effect processing on which the image of other 2nd clip is displayed temporarily ] While displaying 1st frame 60D corresponding to the 1st clip on one 1st or 2nd video track 35C and 35E 2nd frame 60C corresponding to the 2nd clip is displayed on the 2nd or 1st video track 35E of another side, and 35C so that the 1st frame 60D concerned may not be overflowed on a time scale.

[0083] Then, the selection effect dialog 62 is made to open by clicking selection effect carbon button 33R of the step in a screen. After displaying the effect icons 63A-63Y of image special effect processing of the animation system for which it asks after this in the selection effect dialog 62, It is made to move to the location which laps with the end section of 2nd frame 60C in effect truck 35D of the edit list creation 35 on time scale 35A by drag and drop, and the effect icons 63A-63Y concerned are displayed. Moreover, like this, it is made to move to the location with which it laps on the other end of 2nd frame 60C in effect truck 35D of the edit list creation 35, and time scale 35A, and the same effect icons 63A-63Y are displayed.

[0084] [ in the middle of the image of the clip corresponding to 1st frame 60D displayed on the 1st or 2nd video track 35C and 35E which is one side by this ] The image of the clip corresponding to 2nd frame 60C displayed on the 2nd or 1st video track 35E and 35C of another side Directions of the purport

which should be temporarily displayed by image special effect processing according to the effect icons 63A-63Y displayed on effect truck 35D of the edit list creation section 35 can be inputted.

[0085] In addition, the selection effect dialog 62 can be made to close by clicking closing carbon button 65A of the carbon buttons 65A-65E by which it was indicated by two or more on the right-hand side.

[0086] the rear stirrup which carried out still in this way and was created in the edit list -- the creation time of an edit list -- the screen of the Maine screen 30 -- therefore can make a monitor 16 ( drawing 1 R> 1) able to display the edit image based on this edit list on clicking preview carbon button 33D displayed on the middle, and choosing preview mode as mentioned above, and the edit voice based on the edit list concerned can make output from a loudspeaker

[0087] moreover, the screen of the Maine screen 30 after creating an edit list as mentioned above -- therefore it can make it able to perform edit processing based on the edit list concerned as mentioned above to click record carbon button 33G displayed on the middle, and to choose a recording mode, and the edit image and the edit voice which were obtained in this way can be made to record on a video tape through the video tape recorders 14A-14D specified beforehand

[0088] In addition to this configuration, in the case of this edit equipment 1, in the Maine screen 30 and selection effect dialog 62 up one etc., it is expressed as the color from which the effect icons 63A-63Y of image special effect processing of a transition system and the effect icons 63A-63Y of image special effect processing of an animation system differ. Thereby with this edit equipment 1, it is made as [ distinguish / easily / an operator / any of a transition system and an animation system image special effect processing in which it corresponds based on the color of each effect icons 63A-63Y is / in an instant ].

[0089] In addition, in this case, with this edit equipment 1, parts other than a background are displayed in blue (R= 0, G= 0, and B= 128), and, as for the effect icons 63A-63Y corresponding to image special effect processing of a transition system, parts other than a background are displayed with cyanogen (R= 0, G= 128, and B= 128), as for the effect icons 63A-63Y corresponding to image special effect processing of an animation system.

[0090] Thus, the effect icons 63A-63Y on this edit equipment 1 and corresponding to image special effect processing of a transition system, By selecting an affiliated color as a foreground color of the effect icons 63A-63Y corresponding to image special effect processing of an animation system It is made as [ display / it / in as near an image as possible ] so that the image of the effect icons 63A-63Y corresponding to image special effect processing of these transition system and the effect icon corresponding to image special effect processing of an animation system may not be widely different.

[0091] Moreover, in the case of this edit equipment 1, an effect setup dialog 70 like drawing 8 can be displayed in piles on the Maine screen 30 by double-clicking the effect icons 63A-63Y moved onto the user template 66 of the selection effect dialog 62, or effect truck 35D of the edit list creation section 35.

[0092] And an operator can perform setting out or discharge of various function modes, such as setting out or modification of various parameter value, and key mode which displays another image on one image in piles, about the image special effect processing corresponding to the effect (it double-clicked) icons 63A-63Y specified using this effect setup dialog 70.

[0093] In this case, with this edit equipment 1, storage maintenance of the existence of setting out of the various parameter value set up by doing in this way and various function modes is carried out at RAM22 of the main control section 3, and the existence of setting out of these various parameter value by which storage maintenance was carried out, and various function modes is succeeded, when this image special effect processing is used after this.

[0094] for this reason, with this edit equipment 1, when ON setting out of the key mode of such various function modes which is easy to be mistaken especially for failure is carried out In the phase where a fixed indication of the effect icons 63A-63Y of the image special effect processing was given by drag and drop on effect truck 35D of the edit list creation section 35 It is made as [ display / by usually different aposematic coloration from a color (a transition system blue and an animation system cyanogen) / the effect icons 63A-63Y concerned ].

[0095] Thereby, based on the foreground color of the effect icons 63A-63Y displayed on effect truck

35D of the edit list creation section 35 in this edit equipment 1, an operator can distinguish easily whether ON setting out of the key mode is carried out about image special effect processing in which it corresponds in an instant, and it is made as [ prevent / generating of the nonconformity of the edit image which originates in incorrect setting out in key mode in this way / beforehand ].

[0096] In addition, when the effect icons 63A-63Y carry out ON setting out of the key mode using the below-mentioned effect setup dialog 70 ( drawing 8 ) about image special-effect processing in which it corresponds in the condition of having been indicated by fixed on effect truck 35D of the edit list creation section 35 in the case of the gestalt of this operation, in the phase which closed the effect setup dialog 70 concerned, the effect icons 63A-63Y concerned are displayed by the same aposematic coloration as \*\*\*\*.

[0097] or [ and / that that image special effect processing is any of a transition system and an animation system as such aposematic coloration in this case ] -- being concerned -- there is nothing -- MAZENDA (R= 128 --) G= 0 and B= 128 are selected. Therefore, it sets in the phase which the phase where a fixed indication of the effect icons 63A-63Y which correspond when ON setting out of the key mode is carried out was given at effect truck 35D of the edit list creation section 35, or the effect setup dialog 70 closed. Parts other than the background of the effect icons 63A-63Y concerned are displayed in a MAZENDA color.

[0098] (4) various detail setting out of image special effect processing -- in the case of this edit equipment 1, the effect setup dialog 70 shown in drawing 8 can be displayed in piles on the Maine screen 30 here by double-clicking the effect icons 63A-63Y moved as mentioned above onto the user template 66 of the selection effect dialog 62, or effect truck 35D of the edit list creation section 35.

[0099] In this case, two or more tabs 72A-72G are formed in the effect setup dialog 70, and, therefore, setting out and modification of various parameter value corresponding to these tabs 72A-72G, and setting out and discharge of various function modes can be carried out to choosing from from the tabs 72A-72G for which it asks by mouse actuation, while being these tabs 72A-72G, respectively.

[0100] In practice, in the effect setup dialog 70, when edge tab 72A is chosen, the software edge setting-out column 74 and the border setting-out column 75 are displayed like drawing 8 in the content display column 73 of setting out. At this time, the 1st and 2nd selection carbon buttons 76A and 76B which the alphabetic characters of "OFF" and "ON" and these alphabetic characters can be made to be able to respond, respectively, and can make only a gap or one side an ON state are displayed in the software edge setting-out column 74.

[0101] And by being able to choose either of the 1st and 2nd selection carbon buttons 76A and 76B by mouse actuation, for example, choosing 2nd selection carbon button 76B, an operator can set up so that software edge processing (for example, processing which obscures the edge of the line displayed on the boundary of two images at the time of wipe or the boundary of two images) may be performed.

[0102] Moreover, when 2nd selection carbon button 76B of the software edge setting-out column 74 is chosen, the value (parameter value) of that width of face to obscure can be inputted through a keyboard 15 ( drawing 1 ), and the parameter value inputted at this time is displayed in the SOFUTONESU setting-out display 77. In addition, the corresponding up-and-down carbon buttons 78A and 78B are used for this parameter value, and it is 0-255. It can be made to fluctuate free by within the limits.

[0103] On the other hand by edge tab 72A, the 1st and 2nd selection carbon buttons 79A and 79B which the alphabetic characters of "OFF" and "ON" and these alphabetic characters can be made to be able to respond also in the border setting-out column 75, respectively, and can make only a gap or one side an ON state are displayed.

[0104] And by being able to choose either of the 1st and 2nd selection carbon buttons 79A and 79B by mouse actuation, for example, choosing 2nd selection carbon button 79B, an operator can set up so that border display processing (for example, processing which displays a line on the boundary of two images at the time of wipe) may be performed.

[0105] When 2nd selection carbon button 79B of the border setting-out column 75 is chosen, moreover, the width of face (Width) of the line and the hue of a line (Hue), The parameter value of saturation (Sat) and brightness (Lum) can be set up using a keyboard 15. The parameter value inputted at this time is

displayed in the width-of-face setting-out display 80 which corresponds, respectively, hue setting-out display 81A, saturation setting-out display 81B, and brightness setting-out display 81C, and the color based on the hue, the saturation, and the brightness which carried out in this way and were set up is displayed in the color setting-out display 82. In addition, each parameter value displayed on the width-of-face setting-out display 80, hue setting-out display 81A, saturation setting-out display 81B, and brightness setting-out display 81C can be fluctuated free using the up-and-down carbon buttons 83A-83H which correspond, respectively.

[0106] On the other hand, in the effect setup dialog 70 The number of the effect icons 63A-63Y which are concerned, there is nothing in the class of selected tabs 72A-72G, and it faced making that right-hand side open this effect setup dialog 70, and were specified (double click) (Pattern No) The numeric value displayed on each effect iconA [ 63 ]-63Y bottom of drawing 7 , The time code (Start Point) of the head in effect truck 35D of the edit list creation section 35 of the effect icons 63A-63Y is displayed in the pattern number display 84 and the starting point display 85, respectively.

[0107] moreover, in the effect setup dialog 70 The transition setting-out display column 86 and the function setting-out display column 87 are displayed on the right-hand side with this. The frame number display 88 which displays the frame number which should perform image special effect processing according to the effect icons 63A-63Y in the transition setting-out display column 86, The reverse check box 89 for setting up or canceling the reverse mode in which the image by which special effect processing was carried out is displayed on a monitor, The auto-reverse tolan DEISHIYON carbon button 91 for inputting the playback instruction of an image by which special effect processing was carried out at the time of reverse mode, and the adjustment bar 90 for adjusting the reproduction speed at that time are displayed.

[0108] Furthermore in the function setting-out display column 87, the 1st for setting up or canceling key processing, trail processing, and rye TENGU processing - the 3rd check box 91A-91B are displayed. and the 1- which corresponds in setting up the function mode for which it asks -- the inside of 3rd check box 91A - 91C is clicked. the 1- clicked as a result -- a check mark 92 is displayed in 3rd check box 91A - 91C, and ON setting out of that function mode is carried out.

[0109] In addition, in canceling the function mode by which ON setting out was carried out, it clicks the 1st as which the check mark 92 was displayed corresponding - the 3rd check box 91A-91C. As a result, a check mark 92 is eliminated, and off setting out of that function mode is carried out.

[0110] Furthermore in the effect setup dialog 70, default carbon button 93A, O.K. carbon button 93B, Cancel button 93C, and help button 93D are displayed on the lower right side, respectively. And in the effect setup dialog 70, the parameter value therefore displayed by clicking default carbon button 93A, for example in each setting-out display 74 of the content display column 73 of setting out and 75 can be returned to the initial value set up beforehand.

[0111] Moreover, after making each parameter value therefore set as clicking O.K. carbon button 93B in the content display column 73 of setting out incorporate and carrying out storage maintenance, this effect setup dialog 70 can be made to close. In addition, setting out of each parameter value or various function modes by which storage maintenance was carried out by doing in this way is reflected at the time of next edit processing.

[0112] therefore, after making it cancel all of the various function modes which used, set up or inputted this effect setup dialog 70, or parameter value to click Cancel button 93C, it can be made to close this effect setup dialog 70 in the effect setup dialog 70 furthermore, without considering as internal processing and performing setting-out mode change processing and parameter value modification processing namely, -- And therefore, it can make it display predetermined help information in piles on this effect setup dialog 70 to click help button 93D further.

[0113] (5) the various procedure of CPU20 -- the selection effect dialog procedure RT 1 which shows the above processings [ in / in CPU20 of the actual top and main control section 3 / the selection effect dialog 62 ] to drawing 9 R> 9 here -- therefore, process.

[0114] That is, this selection effect dialog procedure RT 1 will be started in a step SP 1, and CPU20 will display the selection effect dialog 62 in piles on the Maine screen 30 in the continuing step SP 2, if



selection effect carbon button 33R of the Maine screen 30 is clicked at the time of edit list creation mode.

[0115] At this time, CPU20 is based on the image data of the effect icons 63A-63Y of each image special effect processing stored in RAM22. About each effect icons 63A-63Y which should be displayed in the selection effect dialog 62 in the opened initial state It is blue, the effect icons 63A-63Y of image special effect processing of a transition system are displayed, and the effect icons 63A-63Y of image special effect processing of an animation system are expressed as cyanogen.

[0116] Subsequently, CPU20 progresses to a step SP 3, and is set to a step SP 3 - a step SP 7 after this. [ whether one which is displayed / whether one of the tabs 64A-64G was chosen and / in the selection effect dialog 62 of the effect icons 63A-63Y was dragged, and ] [ whether the effect icons 63A-63Y displayed on the user template 66 in the selection effect dialog 62 were double-clicked, and ] Other carbon buttons 65B-65E are clicked [ whether closing carbon button 65A of the selection effect dialog 62 was clicked, and ], and other inputs make a sequential judgment of whether it is \*\*\*\*\*.

[0117] And CPU20 repeats step SP3-SP4-SP5-SP6-SP6-SP7-SP's3 loop formation until it will obtain an affirmation result in either a step SP 3 - the step SP 7 return and after this to a step SP 3, if a negative result is altogether obtained in a step SP 3 - a step SP 7.

[0118] On the other hand, if an affirmation result is obtained in a step SP 3, CPU20 will return to a step SP 3, after it progresses to a step SP 8 and displays the tabs 64A-64G. At this time, based on the image data of each effect icons 63A-63Y stored in RAM22, CPU20 is blue in the location where it corresponds in the selection effect dialog 62, displays each effect icons 63A-63Y of image special effect processing of a transition system on it, respectively, and displays each effect icons 63A-63Y of image special-effect processing of an animation system on the location where it corresponds in the selection effect dialog 62 in a cyanogen color.

[0119] Moreover, if an affirmation result is obtained in a step SP 4, CPU20 will indicate by migration the effect icons 63A-63Y which progress and correspond to a step SP 9 so that the Maine screen 30 top may be moved to cursor and one. Moreover, it repeats step SP9-SP10-SP's9 loop formation until it will obtain an affirmation result in this step SP 10 return and after this to a step SP 9, if CPU20 judges whether those effect icons 63A-63Y were dropped in the continuing step SP 10 and a negative result is obtained.

[0120] And if an affirmation result is soon obtained in a step SP 10, CPU20 That progressed to a step SP 11 and the effect icons 63A-63Y were dropped judges whether it is \*\*\*\*\* on effect truck 35D of the edit list creation section 35 of the Maine screen 30. It judges whether if an affirmation result is obtained to this, if a negative result is obtained, it will progress to a step SP 13, and it progresses to a step SP 12, and ON setting out of the key mode is carried out about the image special effect processing corresponding to the effect icons 63A-63Y.

[0121] And if an affirmation result is obtained to return and this to a step SP 3 after CPU20 will progress to a step SP 13 and will indicate those effect icons 63A-63Y by fixed in the location usually dropped by the color, if a negative result is obtained in this step SP 12, after it progresses to a step SP 14 and displays those effect icons 63A-63Y by MAZENDA, it will return to a step SP 3.

[0122] the 1st effect setup dialog procedure RT 2 which progresses to a step SP 15 and is shown in drawing 10 on the other hand when CPU20 obtains an affirmation result in a step SP 5 -- choosing -- the effect setup dialog procedure RT 2 concerned -- therefore, after performing various processings in the above effect setup dialogs 70, it returns to a step SP 3.

[0123] Moreover, if CPU20 ends this selection effect dialog procedure RT 1 and an affirmation result is obtained in a step SP 7 to this after it progresses to a step SP 16 and closes the selection effect dialog 62, if an affirmation result is obtained in step SP, after it performs processing which progresses and corresponds to a step SP 17, it will return to a step SP 3.

[0124] In addition, when the 1st effect setup dialog procedure RT 2 ( drawing 10 ) is chosen in a step SP 16, CPU20 starts this in a step SP 20, and displays the effect setup dialog 70 in piles on the Maine screen 30 in the continuing step SP 21.

[0125] At this time, based on the various data about that image special effect processing stored in

RAM22, CPU20 displays a check mark 92 in corresponding check box 91A - 91C ( drawing 8 R> 8), when the various parameter value set up by preceding is displayed on the displays 77, 80, 81A-81C ( drawing 8 R> 8) which correspond, respectively and various function modes are set up.

[0126] Then, other inputs -- whether CPU20 progressed to a step SP 22, and O.K. carbon button 93B of the effect setup dialog 70 was clicked in a step SP 22 - a step SP 24 after this, whether Cancel button 93C's having been clicked, and other carbon buttons 93C and 93D are clicked, or parameter value is inputted -- make a sequential judgment of whether it is \*\*\*\*\*.

[0127] And CPU20 repeats step SP22-SP23-SP24-SP's22 loop formation until it will obtain an affirmation result in either these steps SP 22 - the step SP 24 return and after this to a step SP 22, if a negative result is obtained in all the step SP 22 - step SP 24.

[0128] On the other hand, if an affirmation result is obtained in a step SP 22, CPU20 The various parameter value which progressed to a step SP 25 and was set up using the effect setup dialog 70, After incorporating the data of the existence of setting out of various function modes etc. to RAM22, It progresses to a step SP 26, and this effect setup dialog 70 is made to close, it progresses to a step SP 27 after this, and this 1st effect setup dialog procedure RT 1 is ended.

[0129] Moreover, CPU20 will progress to a step SP 26, if an affirmation result is obtained in a step SP 23, and if an affirmation result is obtained in a step SP 24 to this, after it performs processing which progresses and corresponds to a step SP 28, it will return to a step SP 22.

[0130] the 2nd effect setup dialog procedure RT 3 which shows CPU20 to drawing 11 on the other hand when the effect icons 63A-63Y displayed on effect truck 35D of the edit list creation section 35 of the Maine screen 30 at the time of edit list creation mode are double-clicked -- therefore, the various above processings are performed.

[0131] Namely, CPU20 If the effect icons 63A-63Y displayed on effect truck 35D of the edit list creation section 35 of the Maine screen 30 are double-clicked, this 2nd effect setup dialog procedure RT 3 will be started in a step SP 30. A step SP 31 - a step SP 37 are sequentially processed after this like the step SP 21 of the 1st effect setup dialog procedure RT 2 ( drawing 10 ) - a step SP 26, and a step SP 28.

[0132] And CPU20 judges whether it progresses to a step SP 38 and ON setting out of the key mode is carried out about the image special effect processing, when the effect setup dialog 70 is made to close in a step SP 36.

[0133] And if an affirmation result is obtained in this step SP 38, after CPU20 will change into a Magenta the foreground color of parts other than the background of the effect icons 63A-63Y which progress and correspond to a step SP 39, it progresses to a step SP 40 and ends this 2nd effect setup dialog procedure RT 3. Moreover, if a negative result is obtained in a step SP 38, CPU20 will progress to the direct step SP 40, and will end this 2nd effect setup dialog procedure RT 3.

[0134] In actuation of the gestalt of this operation, and the configuration beyond effectiveness (5) With this edit equipment 1 The selection effect dialog 62 can be made to open by clicking selection effect carbon button 33R of the Maine screen 30 at the time of the creation mode of an edit list. The effect icons 63A-63Y corresponding to the image special effect processing for which it asks of the effect icons 63A-63Y displayed in this selection effect dialog 62 by drag and drop By making it display that it is made to move to the predetermined location in effect truck 35D of the edit list creation section 35 of the Maine screen 30, and sticks, it can set up so that the image special effect processing may be performed.

[0135] And in this case, on the Maine screen 30 and the selection effect dialog 62, the effect icons 63A-63Y of image special effect processing of a transition system are blue, and are displayed, and each effect icons 63A-63Y of image special effect processing of an animation system are expressed as cyanogen with this edit equipment 1.

[0136] Moreover, about image special effect processing in which ON setting out of the key mode was carried out, the corresponding effect icons 63A-63Y are displayed by MAZENDA in the phase which dropped the corresponding effect icons 63A-63Y on effect truck 35D of the edit list creation section 35, or the phase which closed the effect setup dialog 70.

[0137] Therefore, the image special effect processing corresponding to those effect icons 63A-63Y is any of a transition system and an animation system, or an operator can distinguish easily whether ON



setting out of the key mode is carried out about the image special effect processing corresponding to those effect icons 63A-63Y in an instant, and creation of that part edit list can be made to easy-ize more with this edit equipment 1 based on the foreground color of the effect icons 63A-63Y.

[0138] According to the above configuration, it sets on the Maine screen 30 and the selection effect dialog 62. By having displayed the effect icons 63A-63Y of image special effect processing of a transition system, and the effect icons 63A-63Y of image special effect processing of an animation system in a predetermined color different, respectively It can make it possible to distinguish easily any of a transition system and an animation system image special effect processing in which it corresponds based on the color of each effect icons 63A-63Y is in an instant. The edit equipment which may raise the working efficiency of creation of an edit list on a target markedly in this way is realizable.

[0139] moreover, about image special effect processing in which ON setting out of the key mode was carried out In the phase which closed the phase or the effect setup dialog 70 which dropped the corresponding effect icons 63A-63Y on effect truck 35D of the edit list creation section 35 By having displayed the corresponding effect icons 63A-63Y by usually different aposematic coloration from a color It can make it possible to distinguish whether based on the foreground color of the effect icons 63A-63Y in effect truck 35D of the edit list creation section 35, ON setting out of the key mode is carried out in an instant. The edit equipment which may raise the working efficiency of creation of an edit list more in this way is realizable.

[0140] (6) it is the gestalt of other operations -- in the gestalt of above-mentioned operation, although the case where this invention was applied to the edit equipment 1 constituted like drawing 1 was described This invention can create the edit list which specified the content of edit for connecting not only this but two or more registered image raw materials, and acquiring a desired edit image. To the creation time of the edit list concerned, so that the mark corresponding to the image special effect processing for which it asks may be displayed on the request location of the predetermined part in an edit list It is widely applicable to the edit list listing device of various configurations of having been made as [ set / so that it may carry out and the image special effect processing concerned may be performed ] in addition to this.

[0141] Moreover, in the gestalt of above-mentioned operation, although the case where effect icons 63A-63Y like drawing 7 were applied was described as a different mark for every image special effect processing for recognizing and identifying each image special effect processing set up in the edit list, this invention can apply widely the mark of not only this but various gestalten in addition to this.

[0142] Furthermore in the gestalt of above-mentioned operation, on the display 12 as a display means to display the predetermined screen for edit list creation for creating an edit list (for it to set in the gestalt of this operation and to be the Maine screen 30) Although the case where CPU20 of the main control section 3 which manages control of the edit equipment 1 whole was applied as a display-control means on which the effect icons 63A-63Y are displayed by different color for every class according to the class of image special effect processing was described You may make it this invention form not only this but such a display-control means in CPU20 and another object.

[0143] Furthermore, in the gestalt of above-mentioned operation, although the case where it was made to display by foreground color which classifies the class of image special effect processing into two, a TORAJISHIYON system and an animation system, and is different in the effect icons 63A-63Y about these two kinds was described This invention classifies the class of not only this but image special effect processing into two or more kinds according to classifications other than a TORAJISHIYON system and an animation system, and you may make it display it by different foreground color for every various kinds. Moreover, therefore, the image of the effect icon of various kinds can be made near selecting the foreground color of various kinds in an affiliated color also in this case.

[0144] Although the case where it was blue, furthermore displayed the effect icons 63A-63Y corresponding to image special effect processing of a transition system in the gestalt of above-mentioned operation, and the effect icons 63A-63Y corresponding to an animation system were displayed with cyanogen was described, this invention can apply foreground colors other than this widely not only as this but as these foreground colors.

[0145] Furthermore in the gestalt of above-mentioned operation, on the display 12 as a display means to display the predetermined screen for edit list creation for creating an edit list (for it to set in the gestalt of this operation and to be the Maine screen 30) Although the case where CPU20 of the main control section 3 which manages control of the edit equipment 1 whole as a display-control means on which the corresponding effect icons 63A-63Y are displayed by different aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the key mode was carried out was applied was described You may make it this invention form not only this but such a display-control means in CPU20 and another object.

[0146] Furthermore, in the gestalt of above-mentioned operation, although the case where the corresponding effect icons 63A-63Y were displayed by different aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the key mode was carried out was described It may be made for this invention to apply this invention also about function modes not only this but other than key mode, and even if it is such, it can acquire the same effectiveness as the gestalt of above-mentioned operation.

[0147] Furthermore in the gestalt of above-mentioned operation, about image special effect processing in which ON setting out of the key mode was carried out Although the case where the corresponding effect icons 63A-63Y were displayed by aposematic coloration in the phase displayed on effect truck 35D of the edit list creation section 35 of the Maine screen 30 was described You may make it display this invention by aposematic coloration also in locations not only this but other than effect truck 35D.

[0148] Although the case where it was concerned with a TORAJISHIYON system and an animation system, and the corresponding effect icons 63A-63Y were displayed by MAZENDA that there is nothing about image special effect processing in which ON setting out of the key mode was carried out was furthermore described in the gestalt of above-mentioned operation, you may make it express this invention as colors not only this but other than MAZENDA.

[0149] Moreover, you may make it display by aposematic coloration which is different for every TORAJISHIYON system and animation system in this case. The aposematic coloration of a TORAJISHIYON system and an animation system to make it the usual foreground color about a TORAJISHIYON system and an animation system, and an affiliated color, respectively in this case, therefore It can make it possible to distinguish either a TORAJISHIYON system and an animation system easily in an instant on effect truck 35D of the edit list creation section 35 of the Maine screen 30 also about image special effect processing in which ON setting out of the key mode was carried out.

[0150]

[Effect of the Invention] According to this invention, an edit list can be created as mentioned above. In the edit list listing device set up so that the image special effect processing concerned may be performed, as the mark corresponding to the image special effect processing for which it asks to the creation time of an edit list is displayed on the request location of the predetermined part in an edit list By having established the display-control means on which the mark concerned is displayed by different foreground color for every class concerned according to the class of image special effect processing Easy and the edit list listing device which can make it possible to distinguish in an instant, and may raise the working efficiency of creation of an edit list on a target markedly in this way are [ the class of image special effect processing in which it corresponds based on the foreground color of a mark ] realizable.

[0151] Moreover, it sets to the edit list listing device set up so that the image special effect processing concerned may be performed, as an edit list can be created and the mark corresponding to the image special effect processing for which it asks to the creation time of an edit list is displayed on the request location of the predetermined part in an edit list. By having established the display-control means on which a corresponding mark is displayed by different aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the predetermined function mode was carried out It can make it possible to distinguish easily whether ON setting out of the predetermined function mode is carried out about image special effect processing in which it corresponds based on the color of a mark in an instant, and the edit list listing device which may raise the working efficiency of creation of an edit list on a target markedly in this way can be realized.



## TECHNICAL FIELD

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[Field of the Invention] This invention is applied to the edit equipment made as [ create / the edit list which specified the content of edit for connecting two or more registered image raw materials about an edit list listing device, and acquiring a desired edit image ], and is suitable.

## PRIOR ART

[Description of the Prior Art] As conventionally shown in drawing 12 , as this kind of edit equipment on the edit list creation screen which becomes on a GUI (Graphical User Interface) screen A time scale 100 (time-axis), Video track 101A of \*\*\*\*\* 1, effect truck 101B, and 2nd video track 101C are displayed on this. The 1st and 2nd frame 102A according to the raw material length of an image raw material which wants by mouse actuation on the 1st and 2nd video track 101A and 101C, As the 102B is indicated by sequential so that it may continue on a time scale 100, there are some which were made as [ create / an edit list ].

[0003] And so that it may be located in the location with which the 1st and 2nd frames 101A and 101C lap on a time scale with this edit equipment By displaying the icon 103 according to the image special effect processing for which it asks on effect truck 101B It is made as [ set / it / so that it may switch as the 1st image raw material corresponding to 1st frame 102A, and the 2nd image raw material corresponding to 2nd frame 102B and the image special effect processing concerned may sometimes be performed ].

## EFFECT OF THE INVENTION

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[Effect of the Invention] According to this invention, an edit list can be created as mentioned above. In the edit list listing device set up so that the image special effect processing concerned may be performed, as the mark corresponding to the image special effect processing for which it asks to the creation time of an edit list is displayed on the request location of the predetermined part in an edit list By having established the display-control means on which the mark concerned is displayed by different foreground color for every class concerned according to the class of image special effect processing Easy and the edit list listing device which can make it possible to distinguish in an instant, and may raise the working efficiency of creation of an edit list on a target markedly in this way are [ the class of image special effect processing in which it corresponds based on the foreground color of a mark ] realizable.

[0151] Moreover, it sets to the edit list listing device set up so that the image special effect processing concerned may be performed, as an edit list can be created and the mark corresponding to the image special effect processing for which it asks to the creation time of an edit list is displayed on the request location of the predetermined part in an edit list. By having established the display-control means on which a corresponding mark is displayed by different aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the predetermined function mode was carried out It can make it possible to distinguish easily whether ON setting out of the predetermined function mode is carried out about image special effect processing in which it corresponds based on the color of a mark in an instant, and the edit list listing device which may raise the working efficiency of creation of an edit list on a target markedly in this way can be realized.

## TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] By the way, generally image special effect can be divided into two kinds such as the thing (for example, wipe) of the transition system changed from the 1st image MV1 to 2nd another image MV2 like drawing 13 (A), and the thing (for example, picture Inn picture) of the animation system which displays 2nd another image MV2 temporarily to the 1st image MV1 like drawing 13 (B).

[0005] And the combination of the image which can be used differs -- each image special effect of these transition system and an animation system has the need of being time amount with the 2nd image MV1 shorter than the 1st image MV1, in the image special effect of for example, an animation system.

[0006] However, with the conventional edit equipment mentioned above, the display of any of a transition system and an animation system the image special effect corresponding to each icon 103 is, respectively is not made, but it is \*\*\*\*\* only to an operator's information.

[0007] For this reason, the problem which must choose the image special effect for which it asks again when there are no means which distinguish whether the image special effect corresponding to \*\*\*\*\* or its icon 103 can therefore be used for the error message shown in this edit equipment in the phase where the operator displayed the icon 103 on effect truck 101B and an error message is carried out, for example is \*\*\*\*\*.

[0008] There are some which were built so that the parameter value and the various function modes which were preceded and set up about image special effect for the purpose of raising an operator's user-friendliness as edit equipment furthermore mentioned above might be succeeded until it changes the setting out.

[0009] However, for whether it is set up about various function modes with such edit equipment, if not conscious of being unable to identify even if it sees the icon 103 displayed on effect truck 101B, but ON setting out of the various function modes being carried out, the problem which is it easy to mistake that equipment broke down is \*\*\*\*\* by being in the condition that an edit image does not expect. Therefore it is easy to \*\*\*\*\* to setting out, and especially the so-called key processing that piles up and displays two images is \*\*\*\*\*.

[0010] Therefore, in edit equipment, it is easily discriminable any of a transition system and an animation system the image special effect which it is going to use is, and if it can make it possible to distinguish easily whether ON setting out of the specific function mode is carried out about image special effect processing, it will be thought that the working efficiency of creation of an edit list may be raised.

[0011] This invention was made in consideration of the above point, and tends to propose the edit list listing device which may raise the working efficiency of creation of an edit list on a target markedly.

## MEANS

[Means for Solving the Problem] In order to solve this technical problem, it sets to this invention. In the edit list listing device set up so that the image special effect processing concerned may be performed, as an edit list can be created and the mark corresponding to the image special effect processing for which it asks to the creation time of the edit list concerned is displayed on the request location of the predetermined part in an edit list. A display-control means to display a mark on a display means by different predetermined foreground color for every class concerned according to the class of image special effect processing was established.

[0013] As a result by this edit list listing device, the class of image special effect processing in which it corresponds based on the color of a mark can be distinguished in easy and an instant.

[0014] Moreover, in this invention, can create an edit list and it sets to the edit list listing device set up so that the image special effect processing concerned may be performed, as the mark corresponding to the image special effect processing for which it asks to the creation time of an edit list is displayed on the request location of the predetermined part in an edit list. A display-control means to display a corresponding mark on a display means by different predetermined aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the predetermined function mode was carried out was established.

[0015] As a result with this edit equipment, it can distinguish easily whether predetermined function mode is set up about image special effect processing in which it corresponds in an instant based on the color of the displayed mark.

[0016]

[Embodiment of the Invention] About a drawing, the gestalt of 1 operation of this invention is explained in full detail below.

[0017] (1) In the block diagram 1 of the edit equipment by the gestalt of this operation, 1 shows the edit equipment by the gestalt of this operation as a whole, and while it can register as a clip the request part of the image voice recorded on the video tape, it is made as [ incorporate / to a hard disk drive unit 2 / the video signal and sound signal of a clip for which it asks if needed ].

[0018] moreover, the edit list specified the content of edit for connecting each registered clip in the request condition with this edit equipment 1, and obtaining desired edit image voice -- it can create -- further -- this edit list that created -- therefore, it is made as [ record / edit processing is performed actually and / on a video tape / the edit image and the edit voice which were obtained ].

[0019] That is, this edit equipment 1 is constituted by connecting the main control section 3, the system control section 4, the image input section 5, the video output section 6, the digital image voice-input/output section 7, the image special effect processing section 8, the voice input/output / mixer section 9, and the disk control section 10 mutually through a control bus 11.

[0020] In this case, the main control section 3 displays a predetermined actuation screen (this is hereafter called the Maine screen) on a display 12 at the time of the first stage. Moreover, clip register mode is chosen by operating a mouse 13 in this condition, and the main control section 3 sends out the control command C1 according to this to the system control section 4, if the playback actuation instruction of one set of a video tape recorder 14A-14D is inputted out of two or more sets of the video tape recorders 14A-14D connected to the edit equipment 1 concerned.

[0021] The system control section 4 performs playback actuation of the video signal and sound signal which were recorded on the video tape by sending out a control signal S1 to the corresponding video tape recorders 14A-14D based on the control command C1 supplied.

[0022] As a result, from these video tape recorders 14A-14D, the analog video signal S2 and the analog sound signal S3, and digital video-signal S4 and the digital sound signal S5 are outputted, the analog video signal S2 and the analog sound signal S3 are given to the image input section 5, or the voice input/output / mixer section 9, respectively, and digital video-signal S4 and the digital sound signal S5 are given to the digital image voice-input/output section 7.

[0023] Moreover, the system control section 4 makes either the analog video signal S2 and the analog



sound signal S3 which were outputted from video tape recorders 14A-14D, or digital video-signal S4 and the digital sound signals S5 incorporate by controlling the image input section 5 or the voice input/output / mixer section 9, or the digital image voice-input/output sections 7 through a control bus 11 at this time.

[0024] When it is given to the image special effect processing section 8 as a digital video signal S6 and digital video-signal S4 is incorporated through the digital image voice-input/output section 7 after digital conversion of this was carried out in the image input section 5, when the analog video signal S2 was incorporated through the image input section 5 in this way, this is given to the image special effect processing section 8 as it is.

[0025] The image special effect processing section 8 sends out the digital video signal S6 and S4 which are supplied to the basis of control of the system control section 4 from the image input section 5 or the digital image voice-input/output section 7 to the main control section 3. The digital video signal S6 and the image based on S4 are displayed on the basis of control of the main control section 4 by the display 12 in this way in the predetermined location on the Main screen at this time.

[0026] Moreover, when it is sent out to the loudspeaker which this does not illustrate from a voice input/output / mixer section 9 as it is when the analog sound signal S3 is incorporated at this time and the digital sound signal S5 is incorporated, after analogue conversion of this is carried out in a voice input/output / mixer section 9, it is sent out to a loudspeaker.

[0027] thereby with this edit equipment 1, it be make as [ register / associated data, such as a time code of that Inn point and an out point, and raw material length ( DEYURESHIYON ), / based on the voice output from the image and loudspeaker which be displayed on the display 12 / further / an operator can specify an image and an audio request part using a mouse 13 and a keyboard 15, and / by consider this as a clip / operator / into the main control section 3 ].

[0028] Moreover, the main control section 3 sends out the control command C1 according to this to the system control section 4, when incorporation mode is beforehand chosen at this time.

[0029] The system control section 4 by sending out a control signal S1 to the corresponding video tape recorders 14A-14D based on the control command C1 supplied While making the video tape recorders 14A-14D concerned reproduce the image voice of the specified clip, the image input section 5, and the voice input/output / mixer section 9, By controlling either of the digital image voice-input/output sections 7 through a control bus 11 Either the analog video signal S2 and the analog sound signal S3 which are outputted from video tape recorders 14A-14D, or digital video-signal S4 and the digital sound signals S5 are made to incorporate.

[0030] When it is sent out to the disk control section 10 through the image special effect processing section 8 as a digital video signal S6 and digital video-signal S4 is incorporated through the digital image voice-input/output section 7 after digital conversion of this was carried out in the image input section 5, when the analog video signal S2 was incorporated through the image input section 5 as a result, this is sent out to the disk control section 10 as it is.

[0031] Moreover, when it is sent out to the disk control section 10 as a digital sound signal S7 and the digital sound signal S5 is incorporated through the digital image voice-input/output section 9 after digital conversion of this was carried out in a voice input/output / mixer section 9, when the analog sound signal S3 was incorporated through a voice input/output / mixer section 9 at this time, this is sent out to the direct disk control section 10.

[0032] And the disk control section 10 incorporates the digital video signal S6 and S4 which are given from the image special effect processing section 8 or the digital image voice-input/output section 7, and the digital sound signals S7 and S5 given from a voice input/output / mixer section 9, or the digital image voice-input/output section 7 one by one based on the command given through a control bus 11 from the system control section 4 at this time, and is made to record them on the address position as which these were given to the hard disk drive unit 2, and the hard disk was specified.

[0033] Thus, in this edit equipment 1, it is made as [ incorporate / to a hard disk drive unit 2 / it / the image voice of the specified clip is reproduced from a video tape, and ].

[0034] On the other hand, the main control section 3 will display the list of clips registered into the

Maine screen currently displayed on the display 12, if a clip is registered as mentioned above.

[0035] And an operator can create the edit data which prescribed when which clip and which clip the content of \*\*\*\*\* would connect how using this Maine screen as an edit list. Moreover, an operator can check the edit image based on [ / in the middle of creation ] the edit list in the creation rear stirrup of an edit list, and edit voice.

[0036] In practice, the main control section 3 sends out the control command C1 according to this to the system control section 4, if the preview mode of the edit image voice based on [ / in the middle of creation ] the edit list in the creation rear stirrup of an edit list is chosen.

[0037] While the system control section 4 makes the video tape recorders 14A-14D concerned reproduce the image voice of the clip used for edit processing by sending out a control signal S1 to the video tape recorders 14A-14D which correspond if needed based on the control command C1 supplied. By controlling the disk control section 10 through a control bus 11 if needed, the image voice of the clip used for edit processing is reproduced from a hard disk drive unit 2.

[0038] As a result, from these video tape recorders 14A-14D, the analog video signal S2 and the analog sound signal S3, and digital video-signal S4 and the digital sound signal S5 of the specified clip are outputted, the analog video signal S2 and the analog sound signal S3 are given to the image input section 5, or the voice input/output / mixer section 9, respectively, and digital video-signal S4 and the digital sound signal S5 are given to the digital image voice-input/output section 7.

[0039] The system control section 4 makes either the analog video signal S2 and the analog sound signal S3 which were outputted from video tape recorders 14A-14D, or digital video-signal S4 and the digital sound signals S5 incorporate by controlling the image input section 5 or the voice input/output / mixer section 9, or the digital image voice-input/output sections 7 through a control bus 11 at this time.

[0040] When it is given to the image special effect processing section 8 as a digital video signal S6 and digital video-signal S4 is incorporated through the digital image voice-input/output section 7 after digital conversion of this was carried out in the image input section 5, when the analog video signal S2 was incorporated through the image input section 5 in this way, this is given to the image special effect processing section 8 as it is.

[0041] In the image special effect processing section 8, the special effect processing processing of the digital video signal S6 of each clip supplied to the basis of control of the system control section 4 and the S4 is changed into the condition of having been specified if needed. Moreover, the image special effect processing section 8 inserts image data given if needed from the main control section 4 at this time, such as a title alphabetic character and various GURATSUFUITSUKU, between the digital video signal S6 of each clip, and S4, or superimposes it on the digital video signal S6 and S4, and sends out the digital edit video signal S8 acquired in this way to the video output section 6.

[0042] The video output section 6 carries out analogue conversion of the digital edit video signal S8 supplied to the basis of control of the system control section 4, and sends out obtained edit video-signal S9 to a monitor 16.

[0043] The inside of the analog sound signal S3 outputted from video tape recorders 14A-14D on the other hand at this time, and the digital sound signal S5, When the analog sound signal S3 is incorporated through a voice input/output / mixer section 9 This is sent out to a loudspeaker as a post edit sound signal with which edit processing of mixing etc. was performed if needed in a voice input/output / mixer section 9. When the digital sound signal S5 is incorporated through the digital image voice-input/output section 7, after analogue conversion of this is carried out in a voice input/output / mixer section 9 and edit processing of mixing etc. is performed, it is sent out to a loudspeaker as an edit sound signal.

[0044] As a result, in this edit equipment 1, while the edit image based on edit video-signal S9 is displayed on a monitor 16, the edit voice based on an edit sound signal is outputted from a loudspeaker, and an operator can check the edit image based on an edit list, and edit voice in this way.

[0045] Furthermore, the main control section 3 sends out the control command C1 according to this to the system control section 4, if a mouse 13 or a keyboard 15 is operated and the run command is inputted, after an edit list is created.

[0046] While the system control section 4 makes the video tape recorders 14A-14D concerned

reproduce the image voice of the clip used for edit processing by sending out a control signal S1 to the video tape recorders 14A-14D which correspond if needed based on the control command C1 supplied. By controlling the disk control section 10 through a control bus 11 if needed, the image voice of the clip used for edit processing from a hard disk drive unit 2 is reproduced.

[0047] Like the time of the this result above-mentioned preview mode, the required digital video signal S6 of a clip and S4 are given to the image special effect processing section 8 from video tape recorders 14A-14D via the image input section 5 or the digital image voice-input/output section 7, or the required digital video signal S6 of a clip and S4 are given to it via the disk control section 10 from a hard disk drive unit 2.

[0048] Moreover, at this time, the analog sound signal S3 or the digital sound signal S5 of a required clip is given to a voice input/output / mixer section 9 via the direct or digital image voice-input/output section 7 from video tape recorders 14A-14D, or the digital sound signals S7 and S5 of a required clip are given to it via the disk control section 10 from a hard disk drive unit 2.

[0049] And the image special effect processing section 8 carries out special effect processing processing of the digital video signal S6 of each clip supplied to the basis of control of the system control section 4 like the time of above-mentioned preview mode, and the S4 if needed, and sends out the digital edit video signal S8 which becomes with the video signal of the edit image acquired in this way to the video output section 6.

[0050] The video output section 6 carries out analogue conversion of the digital edit video signal S8 supplied to the basis of control of the system control section 4, and sends out obtained edit video-signal S9 to the corresponding video tape recorders 14A-14D.

[0051] Moreover, at this time, a voice input/output / mixer section 9 performs edit processing of mixing etc. if needed to the analog sound signal S2 or the digital sound signals S5 and S7 of each clip which are supplied to the basis of control of the system control section like the time of above-mentioned preview mode, and sends out the edit sound signal S10 acquired in this way to the corresponding video tape recorders 14A-14D.

[0052] Video tape recorders 14A-14D record edit video-signal S9 supplied from these video output section 6, and the edit sound signal S10 supplied from a voice input/output / mixer section 9 on the location where the video tape was specified based on the control signal S1 given from the system control section 4.

[0053] thus, the edit list created with this edit equipment 1 -- therefore, it is made as [ record / at a video tape / on the condition that the image voice of the specified clip was specified / it / edit processing is carried out and ].

[0054] (2) the configuration of the main control section -- the main control section 3 here, as shown in drawing 2 CPU () [ Central Processing ] Unit20, ROM () [ Read Only ] Memory21, RAM () [ Random ] Access Memory22, the display-processing section 23, the title / graphic generation section 24, interface circuitries 25 and 26, and the SCSI (Small Computer System Interface) interface circuitry 28 the CPU bus 27 It minds, and by connecting, it is constituted, connects with a mouse 13 and a keyboard 15 respectively through each interface circuitries 25 and 26, and connects with the hard disk drive unit 17 through the SCSI interface circuitry 28.

[0055] In this case, by CPU's20 reading the image data in ROM21 if needed based on the program stored in ROM21, and giving this to a display 12 through the display process section 23 A figure, an alphabetic character, etc. which were inputted through the cursor and keyboard 15 which move in the inside of the Maine screen following the Maine screen and the various dialogs like the after-mentioned, and mouse actuation are displayed on a display 12. And the image and static image based on the digital video signal S6 and S4 which are given to the display process section 23 through a title / graphic generation section 24 from the image special effect processing section 8 are displayed on the predetermined location in the Maine screen.

[0056] Moreover, if the run command of predetermined processing is given through interface circuitries 25 and 26 by operating a mouse 13 and a keyboard 15, CPU20 Based on the program stored in ROM21, by sending out control command C1 to the system control section 4 if needed The video tape recorders

14A-14D which correspond through the system control section 4 concerned, The image I/O section 5, the video output section 6, the digital image voice-input/output section 7, the image special effect processing section 8, and various processings that it reaches a voice input/output / mixer section 9, or the disk control section 10 is made to perform predetermined actuation, and were mentioned above as the edit equipment 1 whole in this way are performed.

[0057] Furthermore, CPU20 controls a title / GURAFUTSUKU generation section 24 at the time of the need, makes the image data of a title alphabetic character or a graphic generate based on the program stored in ROM21, sends this out in the image special effect processing section 8, and is made as [ make / these title alphabetic character or a graphic / reflect in an edit image in this way ].

[0058] (3) the operating procedure in the Maine screen -- as for the actual top CPU 20, the power source was switched on here -- starting -- the time -- ROM21 -- storing -- having -- \*\*\*\* -- a program -- being based -- first -- drawing 3 -- being shown -- as -- Maine -- a screen -- 30 -- a display 12 -- displaying -- making .

[0059] Two or more carbon buttons 33A-33T for specifying the clip information-display section 32 for displaying two or more carbon buttons 31A-31Q for choosing the content of processing for which an operator asks, the list of each registered clips, etc., and the various processings in edit list creation time, and the edit list creation section 35 for creating an edit list are formed in this Maine screen 30.

[0060] And therefore, it can make it display a dialog (for this to be hereafter called a video clip edit dialog) 40 like drawing 4 in piles on the Maine screen 30 on this Maine screen 30 to click video clip edit carbon button 31K of a screen upper case.

[0061] In this case, in the video clip edit dialog 40, each video tape recorders 14A-14D are made to correspond to a left-hand side upper case, respectively, two or more indication of the source selection carbon buttons 41A-41D is given, and one set of the desired video tape recorder 14A-14D can be chosen by clicking any one of these source selection carbon buttons 41A-41D by mouse actuation.

[0062] And therefore, an operator can perform actuation according to the carbon buttons 42A-42G for video actuation chosen as the video tape recorders 14A-14D corresponding to the thing to display in the video clip edit dialog 40 concerned, and which shift and clicks those carbon buttons 42A-42G for video actuation, after choosing one of the source selection carbon buttons 14A-14D. In addition, \*\* can be performed to carry out drag actuation of the slider 43 in the video clip edit dialog 40, and, therefore, the video tape recorders 14A-14D which correspond similarly can be made to perform playback actuation. And when video tape recorders 14A-14D are made to perform playback actuation and gear change playback actuation at this time, the image reproduced from the video tape by the video tape recorders 14A-14D concerned is displayed in the live graphic display section 44 in this video clip edit dialog 40.

[0063] An operator can specify the Inn point and out point of an image part which it is therefore going to register into clicking the carbon button 45 for the Inn point assignment, or the carbon button 46 for out point assignment as a clip in this way, inspecting visually the image displayed in this live graphic display section 44. And the image of the Inn point specified at this time and an out point is displayed in the Inn stippling image display 47 or the out stippling image display 48, respectively.

[0064] Moreover, the time code in the video tape of each image specified as the Inn point or an out point at this time is displayed on the Inn point time code display 49 or the out point time code display 50, respectively, and the raw material length (DEYURESHIYON) of the specified clip is displayed on the DEYURESHIYON display 51.

[0065] In addition, therefore in the video clip edit dialog 40, the display image in the live graphic display section 44 can be moved to being able to make the forward direction or hard flow indicate the image therefore displayed on clicking the coma stepper buttons 52A and 52B in the live graphic display section 44 by coma delivery, and clicking the live image migration carbon buttons 53 and 54 to the Inn point or an out point.

[0066] And therefore, an operator can register the part from the Inn point of the image to an out point into clicking the registration carbon button 55 as a clip, after specifying the Inn point and out point of a clip as mentioned above.

[0067] Associated data, such as a time code of the Inn point of that clip currently displayed on the

display 12 at this time and an out point, and raw material length, a preservation location (inside of a video tape or a hard disk drive unit 2), is incorporated by RAM22 as a database. Moreover, associated data, such as a time code of the Inn point of the clip which carried out in this way and was registered, and an out point, and raw material length, is displayed in the clip information-display section 32 of the Maine screen 30 like drawing 5.

[0068] When incorporation mode has therefore been beforehand chosen as furthermore choosing MOABOTAN 56 of this time 40, for example, a video clip edit dialog, on the made setting-out screen with open Lycium chinense which is not illustrated, the data (for example, flag) which are incorporated [ voice / of this clip / image ] by the hard disk drive unit 2 as mentioned above, and express that the preservation location of that clip is in a hard disk drive unit 2 are stored in the location where it corresponds in a database.

[0069] incidentally it is incorporated by the hard disk drive unit 2 by order predetermined time (for example, 2 seconds) from the specified Inn point to an out point namely, -- with this edit equipment 1 at an excess rather than the range which had the video signal and sound signal of this clip specified at this time. Moreover, when link mode is beforehand chosen on this time, for example, an above-mentioned setting-out screen, while an image and voice link as data and are incorporated by the hard disk drive unit 2, it is incorporated by the hard disk drive unit 2 without linking an image and voice as data, when non link mode is chosen.

[0070] And in the video clip edit dialog 40, therefore, it can return to an initial state clicking the new edit carbon button 57, and, thereby, an operator can do sequential registration of other clips with the same procedure as \*\*\*\* after this. Moreover, therefore, it can close that this video clip edit dialog 40 clicks the closing carbon button 58.

[0071] On the other hand, an operator can create an edit list by the following approaches using the edit list creation section 35 of this Maine screen 30 in the condition ( drawing 5 ) that the list of clips registered into the clip information-display section 32 of the Maine screen 30 as mentioned above was displayed.

[0072] In this case, after doubling cursor with the stage of the clip of the request in the clip information-display section 32 by mouse actuation first, as the depression of the carbon button of a mouse 13 is carried out, one clip is specified, and after moving cursor to the request location in the 1st or 2nd video track 35C, and 35E by making time scale 35A of the edit list creation section 35 into an index with that condition, the carbon button of a mouse 13 is released.

[0073] As shown in drawing 6 as a result, the frames 60A-60D of die length according to the raw material length of the clip specified as mentioned above are displayed by making the location of the cursor at that time into a head in this the 1st or 2nd video track 35C, and 35E. moreover, when the image and voice of that clip are linked and registered at this time The 1st or 2nd video track 35C as which the frames 60A-60D were displayed, The frames 60A-60D displayed in the 1st or 2nd video track 35C, and 35E on 35D, the 1st corresponding or the 2nd audio track 35G, and 35H and the frames 61A-61D of the die length same on time scale 35A as the same location are displayed.

[0074] and an operator so that it may carry out by repeating the above actuation and may continue on time scale 35A to the time code (namely, -- a part for the time amount for which it asks) for which it asks from the time code ("00:00.00:00") which time scale 35A begins It is made to display Frames 60A-60D, and 61A-61D on the 1st or 2nd video track 35C and 35E and the 1st or 2nd audio track 35G and 35H one by one.

[0075] In this way here The 1st of the edit list display 35, or 2nd video track 35C, 35E and that Frames 60A-60D, and 61A-61D are displayed on the 1st or 2nd audio track 35G and 35H It means that the image of the clip corresponding to the frames 60A-60D, and 61A-61D is displayed on the time amount expressed with time scale 35A at the time of the output of edit image voice, or voice is outputted.

Therefore, the edit list which comes [ voice / which is displayed by such actuation as an edit image, or is outputted as edit voice / the clip image or voice ] to carry out a sequential convention can be created.

[0076] moreover, in case it does in this way and an edit list is created, from an image to the image of the 2nd clip of the 1st clip to perform image special effect processing of a ton JISHIYON system [ to switch

and sometimes perform image special effect processing ] [ namely, ] While displaying 1st frame 60A corresponding to the 1st clip to precede on one 1st or 2nd video track 35C and 35E The part on the backside [ the 1st frame 60A concerned ] and the part by the side of before [ the ] display 2nd frame 60B corresponding to the 2nd clip which carries out backward on the 2nd or 1st video track 35E of another side, and 35C so that the time code in time scale 35A may lap.

[0077] Then, selection effect carbon button 33R of the step in a screen is clicked. As a result, the icons (these are hereafter called an effect icon) 63A-63Y showing the content of various image special effect processings like drawing 7 which can be performed can display the predetermined dialog (this is hereafter called a selection effect dialog) 62 by which it was indicated by two or more on the Main screen 30.

[0078] in addition, in this selection effect dialog 62 While the various image special effect processings which can be performed are classified into some types ("Cut", "Dissolve", "Wipe", "2D", "Screen", "3D", and "PinP") Therefore the effect icons 63A-63Y of various image special effect processings of the type corresponding to clicking the tabs 64A-64G corresponding to the type for which each type is made to correspond, respectively and Tabs 64A-64G are formed, and it asks [ from ] while being these tabs 64A-64G It can replace with the effect icons 63A-63Y of each image special effect processing of the type currently displayed till then, and can be made to display in the selection effect dialog 62.

[0079] And after the operator displayed the effect icons 63A-63G of image special effect processing of the transition system for which it asks as mentioned above in the selection effect dialog, Move cursor on the effect icon 63A - 63G concerned, and the carbon button of a mouse 13 is pushed after this. The 1st and 2nd frame 60A [ in / for cursor / in the condition / effect truck 35D of the above-mentioned edit list creation section 35 ], 60B makes it move to the part which a time code overlaps on time scale 35A, and releases and (drag and drop) is made to carry out the carbon button of a mouse 13.

[0080] It is displayed on the condition of having been stuck on the location where the effect icons 63A-63Y to which it was dragged in the selection effect dialog 62 as a result moved the screen top to cursor and one, and were dropped.

[0081] By this On the other hand, the image of the clip corresponding to 1st frame 60A displayed on the 1st or 2nd video track 35C and 35E, The 2nd or 1st video track 35E of another side, Directions of the purport which should perform image special effect processing according to the effect icons 63A-63Y stuck as mentioned above in the connector part with the image of the clip corresponding to 2nd frame 60B displayed on 35C can be inputted.

[0082] Namely, on the other hand, for example in the middle of the image of the 1st clip, to perform image special effect processing of an animation system [ to perform image special effect processing on which the image of other 2nd clip is displayed temporarily ] While displaying 1st frame 60D corresponding to the 1st clip on one 1st or 2nd video track 35C and 35E 2nd frame 60C corresponding to the 2nd clip is displayed on the 2nd or 1st video track 35E of another side, and 35C so that the 1st frame 60D concerned may not be overflowed on a time scale.

[0083] Then, the selection effect dialog 62 is made to open by clicking selection effect carbon button 33R of the step in a screen. After displaying the effect icons 63A-63Y of image special effect processing of the animation system for which it asks after this in the selection effect dialog 62, It is made to move to the location which laps with the end section of 2nd frame 60C in effect truck 35D of the edit list creation 35 on time scale 35A by drag and drop, and the effect icons 63A-63Y concerned are displayed. Moreover, like this, it is made to move to the location with which it laps on the other end of 2nd frame 60C in effect truck 35D of the edit list creation 35, and time scale 35A, and the same effect icons 63A-63Y are displayed.

[0084] [ in the middle of the image of the clip corresponding to 1st frame 60D displayed on the 1st or 2nd video track 35C and 35E which is one side by this ] The image of the clip corresponding to 2nd frame 60C displayed on the 2nd or 1st video track 35E and 35C of another side Directions of the purport which should be temporarily displayed by image special effect processing according to the effect icons 63A-63Y displayed on effect truck 35D of the edit list creation section 35 can be inputted.

[0085] In addition, the selection effect dialog 62 can be made to close by clicking closing carbon button



65A of the carbon buttons 65A-65E by which it was indicated by two or more on the right-hand side. [0086] the rear stirrup which carried out still in this way and was created in the edit list -- the creation time of an edit list -- the screen of the Maine screen 30 -- therefore can make a monitor 16 ( drawing 1 R> 1) able to display the edit image based on this edit list on clicking preview carbon button 33D displayed on the middle, and choosing preview mode as mentioned above, and the edit voice based on the edit list concerned can make output from a loudspeaker

[0087] moreover, the screen of the Maine screen 30 after creating an edit list as mentioned above -- therefore it can make it able to perform edit processing based on the edit list concerned as mentioned above to click record carbon button 33G displayed on the middle, and to choose a recording mode, and the edit image and the edit voice which were obtained in this way can be made to record on a video tape through the video tape recorders 14A-14D specified beforehand

[0088] In addition to this configuration, in the case of this edit equipment 1, in the Maine screen 30 and selection effect dialog 62 up one etc., it is expressed as the color from which the effect icons 63A-63Y of image special effect processing of a transition system and the effect icons 63A-63Y of image special effect processing of an animation system differ. Thereby with this edit equipment 1, it is made as [ distinguish / easily / an operator / any of a transition system and an animation system image special effect processing in which it corresponds based on the color of each effect icons 63A-63Y is / in an instant ].

[0089] In addition, in this case, with this edit equipment 1, parts other than a background are displayed in blue (R= 0, G= 0, and B= 128), and, as for the effect icons 63A-63Y corresponding to image special effect processing of a transition system, parts other than a background are displayed with cyanogen (R= 0, G= 128, and B= 128), as for the effect icons 63A-63Y corresponding to image special effect processing of an animation system.

[0090] Thus, the effect icons 63A-63Y on this edit equipment 1 and corresponding to image special effect processing of a transition system, By selecting an affiliated color as a foreground color of the effect icons 63A-63Y corresponding to image special effect processing of an animation system It is made as [ display / it / in as near an image as possible ] so that the image of the effect icons 63A-63Y corresponding to image special effect processing of these transition system and the effect icon corresponding to image special effect processing of an animation system may not be widely different.

[0091] Moreover, in the case of this edit equipment 1, an effect setup dialog 70 like drawing 8 can be displayed in piles on the Maine screen 30 by double-clicking the effect icons 63A-63Y moved onto the user template 66 of the selection effect dialog 62, or effect truck 35D of the edit list creation section 35.

[0092] And an operator can perform setting out or discharge of various function modes, such as setting out or modification of various parameter value, and key mode which displays another image on one image in piles, about the image special effect processing corresponding to the effect (it double-clicked) icons 63A-63Y specified using this effect setup dialog 70.

[0093] In this case, with this edit equipment 1, storage maintenance of the existence of setting out of the various parameter value set up by doing in this way and various function modes is carried out at RAM22 of the main control section 3, and the existence of setting out of these various parameter value by which storage maintenance was carried out, and various function modes is succeeded, when this image special effect processing is used after this.

[0094] for this reason, with this edit equipment 1, when ON setting out of the key mode of such various function modes which is easy to be mistaken especially for failure is carried out In the phase where a fixed indication of the effect icons 63A-63Y of the image special effect processing was given by drag and drop on effect truck 35D of the edit list creation section 35 It is made as [ display / by usually different aposematic coloration from a color (a transition system blue and an animation system cyanogen) / the effect icons 63A-63Y concerned ].

[0095] Thereby, based on the foreground color of the effect icons 63A-63Y displayed on effect truck 35D of the edit list creation section 35 in this edit equipment 1, an operator can distinguish easily whether ON setting out of the key mode is carried out about image special effect processing in\_which it corresponds in an instant, and it is made as [ prevent / generating of the nonconformity of the edit image

which originates in incorrect setting out in key mode in this way / beforehand ].

[0096] In addition, when the effect icons 63A-63Y carry out ON setting out of the key mode using the below-mentioned effect setup dialog 70 ( drawing 8 ) about image special-effect processing in which it corresponds in the condition of having been indicated by fixed on effect truck 35D of the edit list creation section 35 in the case of the gestalt of this operation, in the phase which closed the effect setup dialog 70 concerned, the effect icons 63A-63Y concerned are displayed by the same aposematic coloration as \*\*\*\*.

[0097] or [ and / that that image special effect processing is any of a transition system and an animation system as such aposematic coloration in this case ] -- being concerned -- there is nothing -- MAZENDA (R= 128 --) G= 0 and B= 128 are selected. Therefore, it sets in the phase which the phase where a fixed indication of the effect icons 63A-63Y which correspond when ON setting out of the key mode is carried out was given at effect truck 35D of the edit list creation section 35, or the effect setup dialog 70 closed. Parts other than the background of the effect icons 63A-63Y concerned are displayed in a MAZENDA color.

[0098] (4) various detail setting out of image special effect processing -- in the case of this edit equipment 1, the effect setup dialog 70 shown in drawing 8 can be displayed in piles on the Maine screen 30 here by double-clicking the effect icons 63A-63Y moved as mentioned above onto the user template 66 of the selection effect dialog 62, or effect truck 35D of the edit list creation section 35.

[0099] In this case, two or more tabs 72A-72G are formed in the effect setup dialog 70, and, therefore, setting out and modification of various parameter value corresponding to these tabs 72A-72G, and setting out and discharge of various function modes can be carried out to choosing from from the tabs 72A-72G for which it asks by mouse actuation, while being these tabs 72A-72G, respectively.

[0100] In practice, in the effect setup dialog 70, when edge tab 72A is chosen, the software edge setting-out column 74 and the border setting-out column 75 are displayed like drawing 8 in the content display column 73 of setting out. At this time, the 1st and 2nd selection carbon buttons 76A and 76B which the alphabetic characters of "OFF" and "ON" and these alphabetic characters can be made to be able to respond, respectively, and can make only a gap or one side an ON state are displayed in the software edge setting-out column 74.

[0101] And by being able to choose either of the 1st and 2nd selection carbon buttons 76A and 76B by mouse actuation, for example, choosing 2nd selection carbon button 76B, an operator can set up so that software edge processing (for example, processing which obscures the edge of the line displayed on the boundary of two images at the time of wipe or the boundary of two images) may be performed.

[0102] Moreover, when 2nd selection carbon button 76B of the software edge setting-out column 74 is chosen, the value (parameter value) of that width of face to obscure can be inputted through a keyboard 15 ( drawing 1 ), and the parameter value inputted at this time is displayed in the SOFUTONESU setting-out display 77. In addition, the corresponding up-and-down carbon buttons 78A and 78B are used for this parameter value, and it is 0-255. It can be made to fluctuate free by within the limits.

[0103] On the other hand by edge tab 72A, the 1st and 2nd selection carbon buttons 79A and 79B which the alphabetic characters of "OFF" and "ON" and these alphabetic characters can be made to be able to respond also in the border setting-out column 75, respectively, and can make only a gap or one side an ON state are displayed.

[0104] And by being able to choose either of the 1st and 2nd selection carbon buttons 79A and 79B by mouse actuation, for example, choosing 2nd selection carbon button 79B, an operator can set up so that border display processing (for example, processing which displays a line on the boundary of two images at the time of wipe) may be performed.

[0105] When 2nd selection carbon button 79B of the border setting-out column 75 is chosen, moreover, the width of face (Width) of the line and the hue of a line (Hue), The parameter value of saturation (Sat) and brightness (Lum) can be set up using a keyboard 15. The parameter value inputted at this time is displayed in the width-of-face setting-out display 80 which corresponds, respectively, hue setting-out display 81A, saturation setting-out display 81B, and brightness setting-out display 81C, and the color based on the hue, the saturation, and the brightness which carried out in this way and were set up is



displayed in the color setting-out display 82. In addition, each parameter value displayed on the width-of-face setting-out display 80, hue setting-out display 81A, saturation setting-out display 81B, and brightness setting-out display 81C can be fluctuated free using the up-and-down carbon buttons 83A-83H which correspond, respectively.

[0106] On the other hand, in the effect setup dialog 70 The number of the effect icons 63A-63Y which are concerned, there is nothing in the class of selected tabs 72A-72G, and it faced making that right-hand side open this effect setup dialog 70, and were specified (double click) (Pattern No) The numeric value displayed on each effect iconA [ 63 ]-63Y bottom of drawing 7 , The time code (Start Point) of the head in effect truck 35D of the edit list creation section 35 of the effect icons 63A-63Y is displayed in the pattern number display 84 and the starting point display 85, respectively.

[0107] moreover, in the effect setup dialog 70 The transition setting-out display column 86 and the function setting-out display column 87 are displayed on the right-hand side with this. The frame number display 88 which displays the frame number which should perform image special effect processing according to the effect icons 63A-63Y in the transition setting-out display column 86, The reverse check box 89 for setting up or canceling the reverse mode in which the image by which special effect processing was carried out is displayed on a monitor, The auto-reverse tolan DEISHIYON carbon button 91 for inputting the playback instruction of an image by which special effect processing was carried out at the time of reverse mode, and the adjustment bar 90 for adjusting the reproduction speed at that time are displayed.

[0108] Furthermore in the function setting-out display column 87, the 1st for setting up or canceling key processing, trail processing, and rye TENGU processing - the 3rd check box 91A-91B are displayed. and the 1- which corresponds in setting up the function mode for which it asks -- the inside of 3rd check box 91A - 91C is clicked. the 1- clicked as a result -- a check mark 92 is displayed in 3rd check box 91A - 91C, and ON setting out of that function mode is carried out.

[0109] In addition, in canceling the function mode by which ON setting out was carried out, it clicks the 1st as which the check mark 92 was displayed corresponding - the 3rd check box 91A-91C. As a result, a check mark 92 is eliminated, and off setting out of that function mode is carried out.

[0110] Furthermore in the effect setup dialog 70, default carbon button 93A, O.K. carbon button 93B, Cancel button 93C, and help button 93D are displayed on the lower right side, respectively. And in the effect setup dialog 70, the parameter value therefore displayed by clicking default carbon button 93A, for example in each setting-out display 74 of the content display column 73 of setting out and 75 can be returned to the initial value set up beforehand.

[0111] Moreover, after making each parameter value therefore set as clicking O.K. carbon button 93B in the content display column 73 of setting out incorporate and carrying out storage maintenance, this effect setup dialog 70 can be made to close. In addition, setting out of each parameter value or various function modes by which storage maintenance was carried out by doing in this way is reflected at the time of next edit processing.

[0112] therefore, after making it cancel all of the various function modes which used, set up or inputted this effect setup dialog 70, or parameter value to click Cancel button 93C, it can be made to close this effect setup dialog 70 in the effect setup dialog 70 furthermore, without considering as internal processing and performing setting-out mode change processing and parameter value modification processing namely, -- And therefore, it can make it display predetermined help information in piles on this effect setup dialog 70 to click help button 93D further.

[0113] (5) the various procedure of CPU20 -- the selection effect dialog procedure RT 1 which shows the above processings [ in / in CPU20 of the actual top and main control section 3 / the selection effect dialog 62 ] to drawing 9 R> 9 here -- therefore, process.

[0114] That is, this selection effect dialog procedure RT 1 will be started in a step SP 1, and CPU20 will display the selection effect dialog 62 in piles on the Maine screen 30 in the continuing step SP 2, if selection effect carbon button 33R of the Maine screen 30 is clicked at the time of edit list creation mode.

[0115] At this time, CPU20 is based on the image data of the effect icons 63A-63Y of each image

special effect processing stored in RAM22. About each effect icons 63A-63Y which should be displayed in the selection effect dialog 62 in the opened initial state It is blue, the effect icons 63A-63Y of image special effect processing of a transition system are displayed, and the effect icons 63A-63Y of image special effect processing of an animation system are expressed as cyanogen.

[0116] Subsequently, CPU20 progresses to a step SP 3, and is set to a step SP 3 - a step SP 7 after this. [ whether one which is displayed / whether one of the tabs 64A-64G was chosen and / in the selection effect dialog 62 of the effect icons 63A-63Y was dragged, and ] [ whether the effect icons 63A-63Y displayed on the user template 66 in the selection effect dialog 62 were double-clicked, and ] Other carbon buttons 65B-65E are clicked [ whether closing carbon button 65A of the selection effect dialog 62 was clicked, and ], and other inputs make a sequential judgment of whether it is \*\*\*\*\*.

[0117] And CPU20 repeats step SP3-SP4-SP5-SP6-SP6-SP7-SP's3 loop formation until it will obtain an affirmation result in either a step SP 3 - the step SP 7 return and after this to a step SP 3, if a negative result is altogether obtained in a step SP 3 - a step SP 7.

[0118] On the other hand, if an affirmation result is obtained in a step SP 3, CPU20 will return to a step SP 3, after it progresses to a step SP 8 and displays the tabs 64A-64G. At this time, based on the image data of each effect icons 63A-63Y stored in RAM22, CPU20 is blue in the location where it corresponds in the selection effect dialog 62, displays each effect icons 63A-63Y of image special effect processing of a transition system on it, respectively, and displays each effect icons 63A-63Y of image special-effect processing of an animation system on the location where it corresponds in the selection effect dialog 62 in a cyanogen color.

[0119] Moreover, if an affirmation result is obtained in a step SP 4, CPU20 will indicate by migration the effect icons 63A-63Y which progress and correspond to a step SP 9 so that the Maine screen 30 top may be moved to cursor and one. Moreover, it repeats step SP9-SP10-SP's9 loop formation until it will obtain an affirmation result in this step SP 10 return and after this to a step SP 9, if CPU20 judges whether those effect icons 63A-63Y were dropped in the continuing step SP 10 and a negative result is obtained.

[0120] And if an affirmation result is soon obtained in a step SP 10, CPU20 That progressed to a step SP 11 and the effect icons 63A-63Y were dropped judges whether it is \*\*\*\*\* on effect truck 35D of the edit list creation section 35 of the Maine screen 30. It judges whether if an affirmation result is obtained to this, if a negative result is obtained, it will progress to a step SP 13, and it progresses to a step SP 12, and ON setting out of the key mode is carried out about the image special effect processing corresponding to the effect icons 63A-63Y.

[0121] And if an affirmation result is obtained to return and this to a step SP 3 after CPU20 will progress to a step SP 13 and will indicate those effect icons 63A-63Y by fixed in the location usually dropped by the color, if a negative result is obtained in this step SP 12, after it progresses to a step SP 14 and displays those effect icons 63A-63Y by MAZENDA, it will return to a step SP 3.

[0122] the 1st effect setup dialog procedure RT 2 which progresses to a step SP 15 and is shown in drawing 10 on the other hand when CPU20 obtains an affirmation result in a step SP 5 -- choosing -- the effect setup dialog procedure RT 2 concerned -- therefore, after performing various processings in the above effect setup dialogs 70, it returns to a step SP 3.

[0123] Moreover, if CPU20 ends this selection effect dialog procedure RT 1 and an affirmation result is obtained in a step SP 7 to this after it progresses to a step SP 16 and closes the selection effect dialog 62, if an affirmation result is obtained in step SP, after it performs processing which progresses and corresponds to a step SP 17, it will return to a step SP 3.

[0124] In addition, when the 1st effect setup dialog procedure RT 2 ( drawing 10 ) is chosen in a step SP 16, CPU20 starts this in a step SP 20, and displays the effect setup dialog 70 in piles on the Maine screen 30 in the continuing step SP 21.

[0125] At this time, based on the various data about that image special effect processing stored in RAM22, CPU20 displays a check mark 92 in corresponding check box 91A - 91C ( drawing 8 R> 8), when the various parameter value set up by preceding is displayed on the displays 77, 80, 81A-81C ( drawing 8 R> 8) which correspond, respectively and various function modes are set up.

[0126] Then, other inputs -- whether CPU20 progressed to a step SP 22, and O.K. carbon button 93B of the effect setup dialog 70 was clicked in a step SP 22 - a step SP 24 after this, whether Cancel button 93C's having been clicked, and other carbon buttons 93C and 93D are clicked, or parameter value is inputted -- make a sequential judgment of whether it is \*\*\*\*\*.

[0127] And CPU20 repeats step SP22-SP23-SP24-SP's22 loop formation until it will obtain an affirmation result in either these steps SP 22 - the step SP 24 return and after this to a step SP 22, if a negative result is obtained in all the step SP 22 - step SP 24.

[0128] On the other hand, if an affirmation result is obtained in a step SP 22, CPU20 The various parameter value which progressed to a step SP 25 and was set up using the effect setup dialog 70, After incorporating the data of the existence of setting out of various function modes etc. to RAM22, It progresses to a step SP 26, and this effect setup dialog 70 is made to close, it progresses to a step SP 27 after this, and this 1st effect setup dialog procedure RT 1 is ended.

[0129] Moreover, CPU20 will progress to a step SP 26, if an affirmation result is obtained in a step SP 23, and if an affirmation result is obtained in a step SP 24 to this, after it performs processing which progresses and corresponds to a step SP 28, it will return to a step SP 22.

[0130] the 2nd effect setup dialog procedure RT 3 which shows CPU20 to drawing 11 on the other hand when the effect icons 63A-63Y displayed on effect truck 35D of the edit list creation section 35 of the Maine screen 30 at the time of edit list creation mode are double-clicked -- therefore, the various above processings are performed.

[0131] Namely, CPU20 If the effect icons 63A-63Y displayed on effect truck 35D of the edit list creation section 35 of the Maine screen 30 are double-clicked, this 2nd effect setup dialog procedure RT 3 will be started in a step SP 30. A step SP 31 - a step SP 37 are sequentially processed after this like the step SP 21 of the 1st effect setup dialog procedure RT 2 ( drawing 10 ) - a step SP 26, and a step SP 28.

[0132] And CPU20 judges whether it progresses to a step SP 38 and ON setting out of the key mode is carried out about the image special effect processing, when the effect setup dialog 70 is made to close in a step SP 36.

[0133] And if an affirmation result is obtained in this step SP 38, after CPU20 will change into a Magenta the foreground color of parts other than the background of the effect icons 63A-63Y which progress and correspond to a step SP 39, it progresses to a step SP 40 and ends this 2nd effect setup dialog procedure RT 3. Moreover, if a negative result is obtained in a step SP 38, CPU20 will progress to the direct step SP 40, and will end this 2nd effect setup dialog procedure RT 3.

[0134] In actuation of the gestalt of this operation, and the configuration beyond effectiveness (5) With this edit equipment 1 The selection effect dialog 62 can be made to open by clicking selection effect carbon button 33R of the Maine screen 30 at the time of the creation mode of an edit list. The effect icons 63A-63Y corresponding to the image special effect processing for which it asks of the effect icons 63A-63Y displayed in this selection effect dialog 62 by drag and drop By making it display that it is made to move to the predetermined location in effect truck 35D of the edit list creation section 35 of the Maine screen 30, and sticks, it can set up so that the image special effect processing may be performed.

[0135] And in this case, on the Maine screen 30 and the selection effect dialog 62, the effect icons 63A-63Y of image special effect processing of a transition system are blue, and are displayed, and each effect icons 63A-63Y of image special effect processing of an animation system are expressed as cyanogen with this edit equipment 1.

[0136] Moreover, about image special effect processing in which ON setting out of the key mode was carried out, the corresponding effect icons 63A-63Y are displayed by MAZENDA in the phase which dropped the corresponding effect icons 63A-63Y on effect truck 35D of the edit list creation section 35, or the phase which closed the effect setup dialog 70.

[0137] Therefore, the image special effect processing corresponding to those effect icons 63A-63Y is any of a transition system and an animation system, or an operator can distinguish easily whether ON setting out of the key mode is carried out about the image special effect processing corresponding to those effect icons 63A-63Y in an instant, and creation of that part edit list can be made to easy-ize more with this edit equipment 1 based on the foreground color of the effect icons 63A-63Y.

[0138] According to the above configuration, it sets on the Maine screen 30 and the selection effect dialog 62. By having displayed the effect icons 63A-63Y of image special effect processing of a transition system, and the effect icons 63A-63Y of image special effect processing of an animation system in a predetermined color different, respectively It can make it possible to distinguish easily any of a transition system and an animation system image special effect processing in which it corresponds based on the color of each effect icons 63A-63Y is in an instant. The edit equipment which may raise the working efficiency of creation of an edit list on a target markedly in this way is realizable.

[0139] moreover, about image special effect processing in which ON setting out of the key mode was carried out In the phase which closed the phase or the effect setup dialog 70 which dropped the corresponding effect icons 63A-63Y on effect truck 35D of the edit list creation section 35 By having displayed the corresponding effect icons 63A-63Y by usually different aposematic coloration from a color It can make it possible to distinguish whether based on the foreground color of the effect icons 63A-63Y in effect truck 35D of the edit list creation section 35, ON setting out of the key mode is carried out in an instant. The edit equipment which may raise the working efficiency of creation of an edit list more in this way is realizable.

[0140] (6) it is the gestalt of other operations -- in the gestalt of above-mentioned operation, although the case where this invention was applied to the edit equipment 1 constituted like drawing 1 was described This invention can create the edit list which specified the content of edit for connecting not only this but two or more registered image raw materials, and acquiring a desired edit image. To the creation time of the edit list concerned, so that the mark corresponding to the image special effect processing for which it asks may be displayed on the request location of the predetermined part in an edit list It is widely applicable to the edit list listing device of various configurations of having been made as [ set / so that it may carry out and the image special effect processing concerned may be performed ] in addition to this.

[0141] Moreover, in the gestalt of above-mentioned operation, although the case where effect icons 63A-63Y like drawing 7 were applied was described as a different mark for every image special effect processing for recognizing and identifying each image special effect processing set up in the edit list, this invention can apply widely the mark of not only this but various gestalten in addition to this.

[0142] Furthermore in the gestalt of above-mentioned operation, on the display 12 as a display means to display the predetermined screen for edit list creation for creating an edit list (for it to set in the gestalt of this operation and to be the Maine screen 30) Although the case where CPU20 of the main control section 3 which manages control of the edit equipment 1 whole was applied as a display-control means on which the effect icons 63A-63Y are displayed by different color for every class according to the class of image special effect processing was described You may make it this invention form not only this but such a display-control means in CPU20 and another object.

[0143] Furthermore, in the gestalt of above-mentioned operation, although the case where it was made to display by foreground color which classifies the class of image special effect processing into two, a TORAJISHIYON system and an animation system, and is different in the effect icons 63A-63Y about these two kinds was described This invention classifies the class of not only this but image special effect processing into two or more kinds according to classifications other than a TORAJISHIYON system and an animation system, and you may make it display it by different foreground color for every various kinds. Moreover, therefore, the image of the effect icon of various kinds can be made near selecting the foreground color of various kinds in an affiliated color also in this case.

[0144] Although the case where it was blue, furthermore displayed the effect icons 63A-63Y corresponding to image special effect processing of a transition system in the gestalt of above-mentioned operation, and the effect icons 63A-63Y corresponding to an animation system were displayed with cyanogen was described, this invention can apply foreground colors other than this widely not only as this but as these foreground colors.

[0145] Furthermore in the gestalt of above-mentioned operation, on the display 12 as a display means to display the predetermined screen for edit list creation for creating an edit list (for it to set in the gestalt of this operation and to be the Maine screen 30) Although the case where CPU20 of the main control

section 3 which manages control of the edit equipment 1 whole as a display-control means on which the corresponding effect icons 63A-63Y are displayed by different aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the key mode was carried out was applied was described You may make it this invention form not only this but such a display-control means in CPU20 and another object.

[0146] Furthermore, in the gestalt of above-mentioned operation, although the case where the corresponding effect icons 63A-63Y were displayed by different aposematic coloration from the usual foreground color about image special effect processing in which ON setting out of the key mode was carried out was described It may be made for this invention to apply this invention also about function modes not only this but other than key mode, and even if it is such, it can acquire the same effectiveness as the gestalt of above-mentioned operation.

[0147] Furthermore in the gestalt of above-mentioned operation, about image special effect processing in which ON setting out of the key mode was carried out Although the case where the corresponding effect icons 63A-63Y were displayed by aposematic coloration in the phase displayed on effect truck 35D of the edit list creation section 35 of the Maine screen 30 was described You may make it display this invention by aposematic coloration also in locations not only this but other than effect truck 35D.

[0148] Although the case where it was concerned with a TORAJISHIYON system and an animation system, and the corresponding effect icons 63A-63Y were displayed by MAZENDA that there is nothing about image special effect processing in which ON setting out of the key mode was carried out was furthermore described in the gestalt of above-mentioned operation, you may make it express this invention as colors not only this but other than MAZENDA.

[0149] Moreover, you may make it display by aposematic coloration which is different for every TORAJISHIYON system and animation system in this case. The aposematic coloration of a TORAJISHIYON system and an animation system to make it the usual foreground color about a TORAJISHIYON system and an animation system, and an affiliated color, respectively in this case, therefore It can make it possible to distinguish either a TORAJISHIYON system and an animation system easily in an instant on effect truck 35D of the edit list creation section 35 of the Maine screen 30 also about image special effect processing in which ON setting out of the key mode was carried out.

DESCRIPTION OF DRAWINGS

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## [Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the whole edit equipment configuration by the gestalt of this operation.

[Drawing 2] It is the block diagram showing the configuration of the main control section.

[Drawing 3] It is approximate line drawing showing the Maine screen.

[Drawing 4] It is approximate line drawing showing a video clip edit dialog.

[Drawing 5] It is approximate line drawing showing the Maine screen.

[Drawing 6] It is approximate line drawing showing the Maine screen.

[Drawing 7] It is approximate line drawing showing a selection effect dialog.

[Drawing 8] It is approximate line drawing showing an effect setup dialog.

[Drawing 9] It is the flow chart which shows selection effect dialog procedure.

[Drawing 10] It is the flow chart which shows the 1st effect setup dialog procedure.

[Drawing 11] It is the flow chart which shows the 2nd effect setup dialog procedure.

[Drawing 12] It is approximate line drawing of the edit list creation screen in conventional edit equipment showing the example of a configuration in part.

[Drawing 13] It is the conceptual diagram with which explanation of each image special effect of a transition system and an animation system is presented.

## [Description of Notations]

1 [ .. Keyboard, ] .... Edit equipment, 3 .. The main control section, 13 .. A mouse, 15 20 [ .. Edit list creation section, ] .... CPU, 22 .. RAM, 30 .. The Maine screen, 35 35A .... A time scale, 35C, 35E .. A video track, 35D .. Effect truck, 60A-60D .... A frame, 62 .. A selection effect dialog, 63A-63Y .. Effect icon, 70 [ .. 2nd effect setup dialog procedure. ] .... An effect setup dialog, RT1 .. A selection effect dialog, RT2 .. The 1st effect setup dialog procedure, RT3

## DRAWINGS

[Drawing 2]

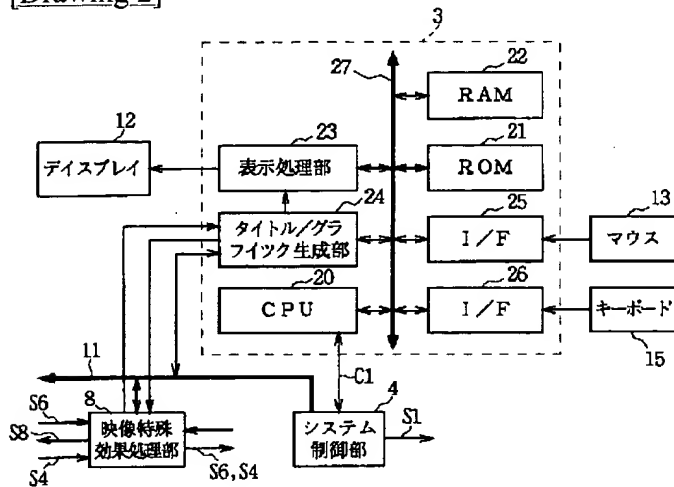
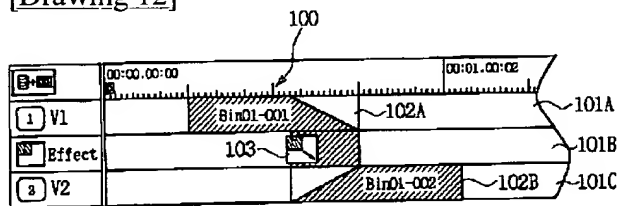


図2 主制御部の構成

[Drawing 12]

図12 従来の編集装置における  
編集リスト作成画面の一部構成例

[Drawing 1]

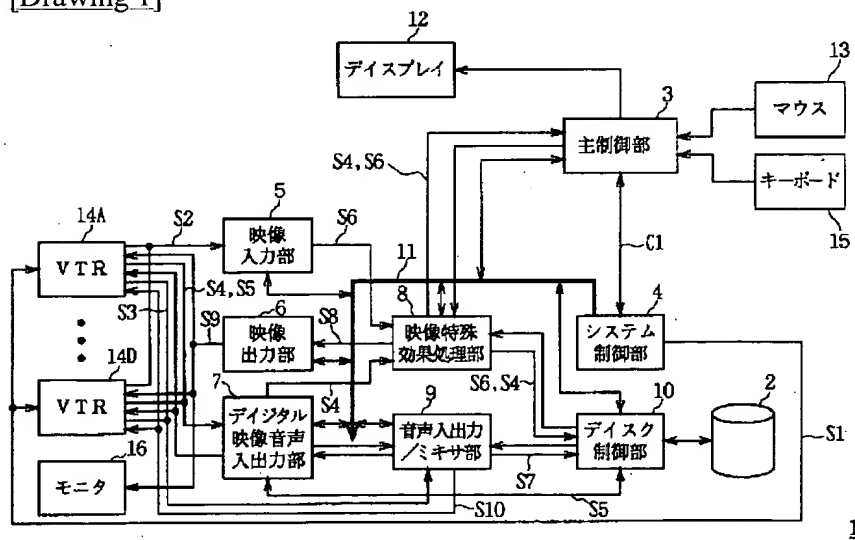


図1 本実施の形態による編集装置の構成

[Drawing 3]

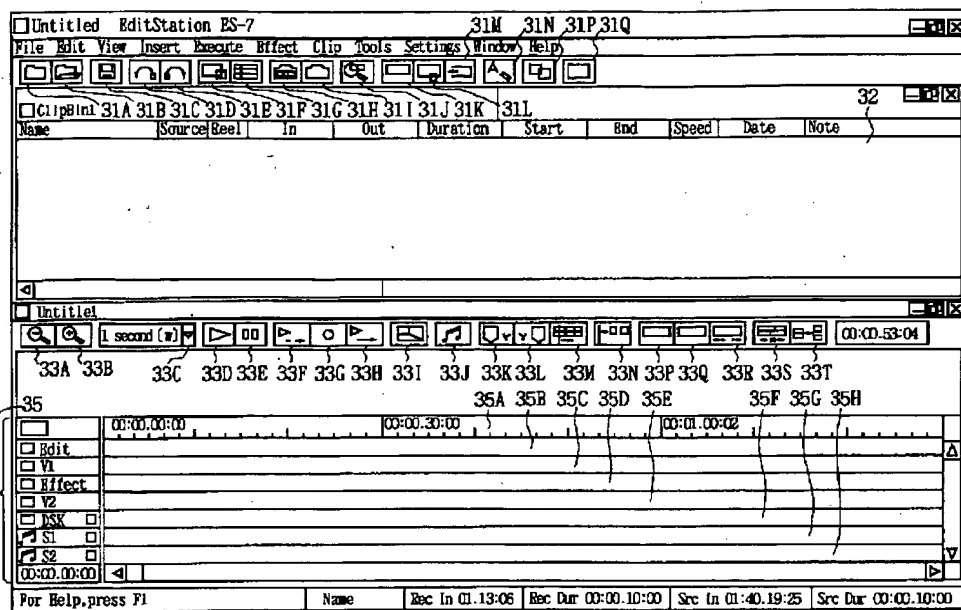


図3 メイン画面(1)

30

[Drawing 4]

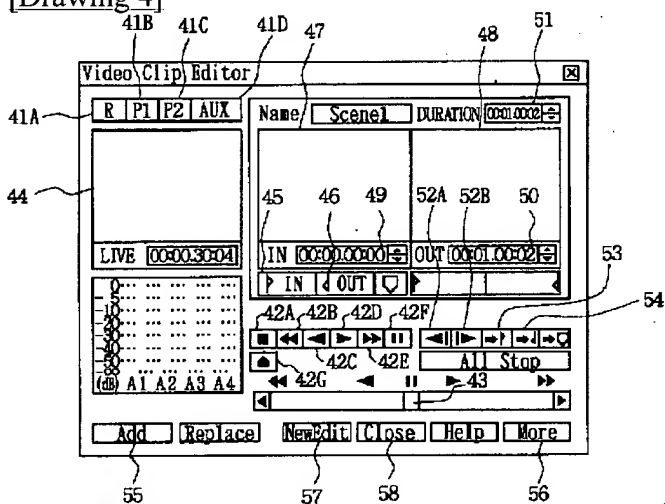


図4 ビデオクリップエディットダイアログ

[Drawing 5]



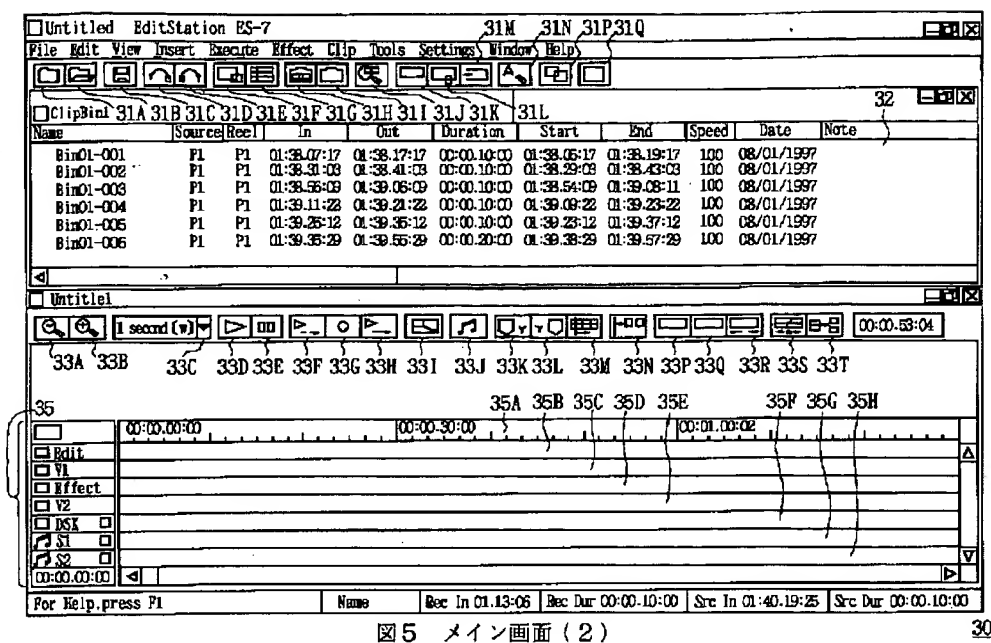
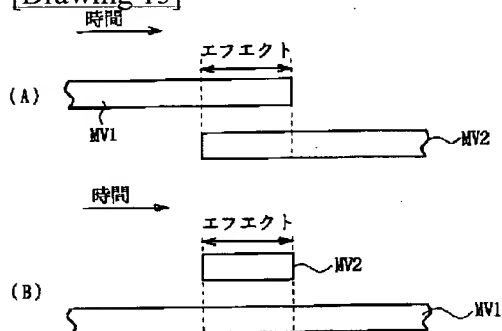


図 5 メイン画面 (2)

30

## [Drawing 13]

図 13 トランジション系及び  
アニメーション系の各映像特殊効果

## [Drawing 6]

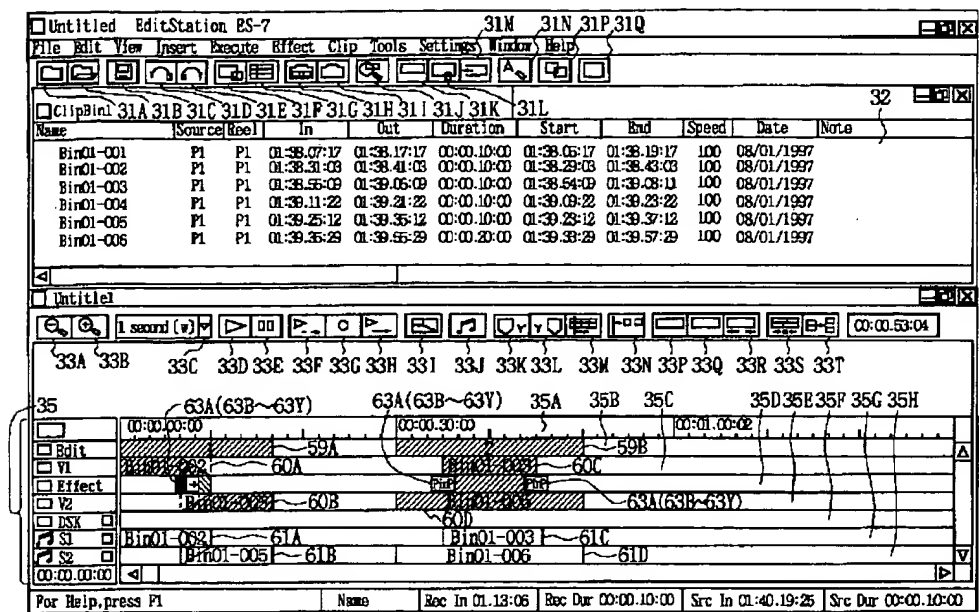


図6 メイン画面 (3)

30

[Drawing 7]

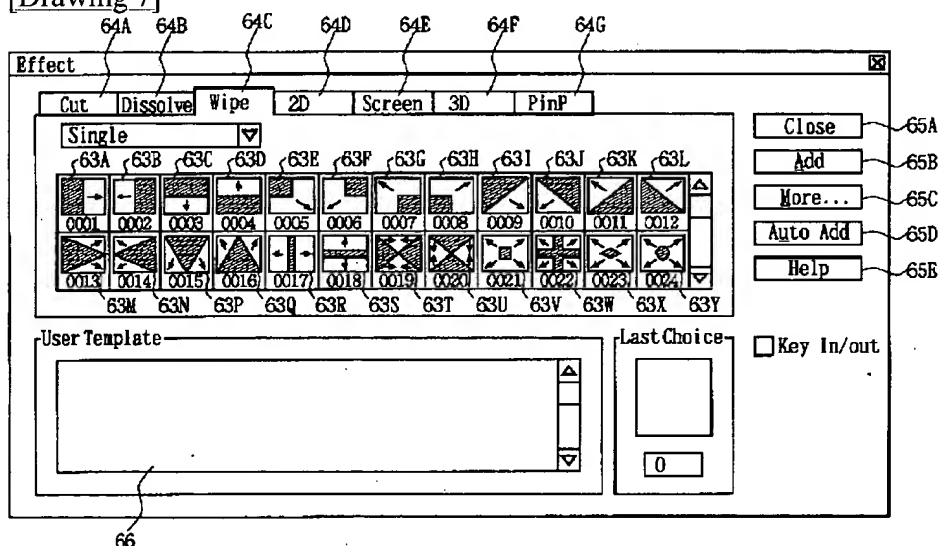


図7 セレクトエフェクトダイアログ

62

[Drawing 8]

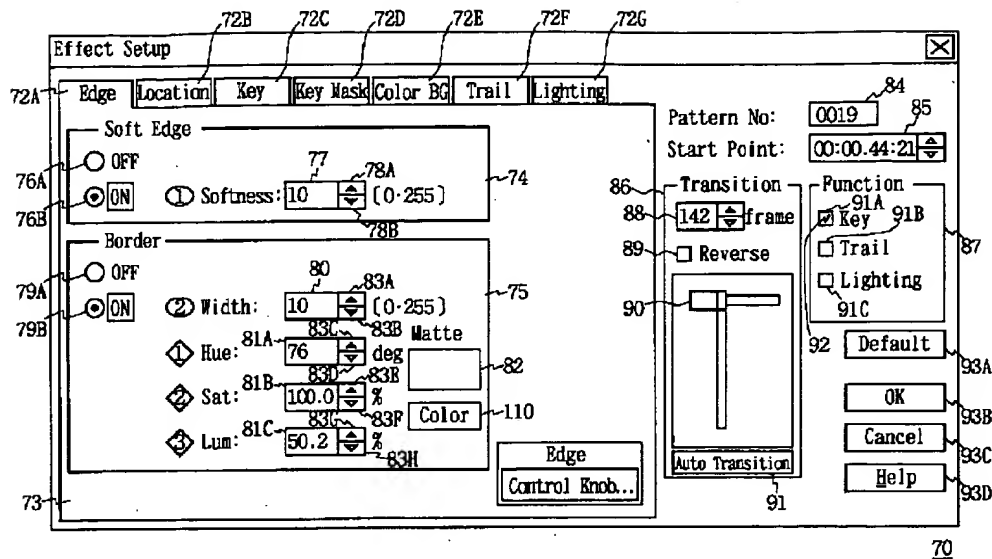


図8 エフェクトセットアップダイアログ

## [Drawing 9]

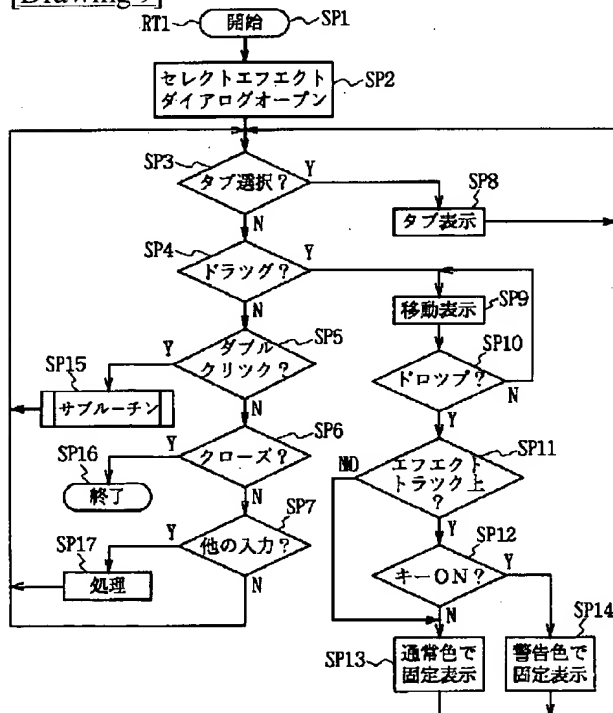


図9 セレクトエフェクトダイアログ処理手順

## [Drawing 10]

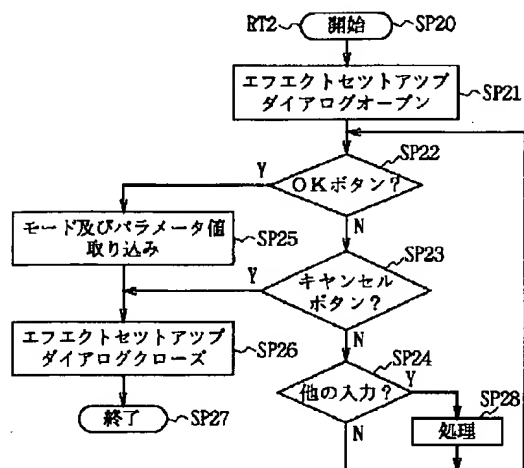


図10 第1のエフェクトセットアップダイアログ処理手順

[Drawing 11]

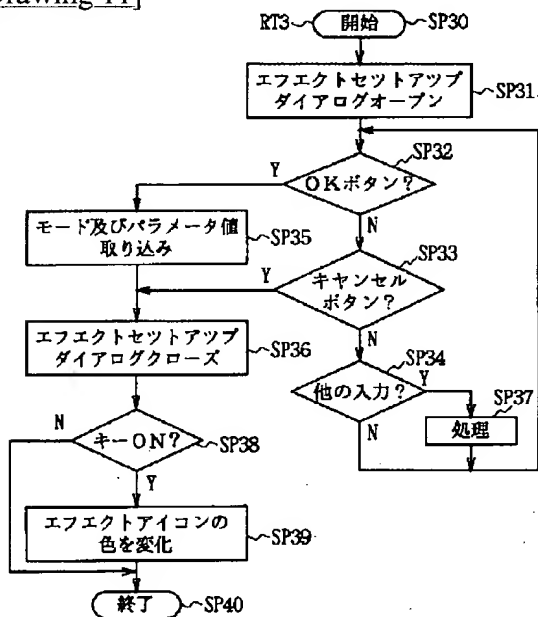


図11 第2のエフェクトセットアップダイアログ処理手順

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(54) 【発明の名称】 編集リスト作成装置

(57) 【要約】

【課題】 編集リストの作成作業の作業効率を格段的に向上させ得る編集リスト作成装置を実現し難かつた。

【解決手段】 編集リストを作成でき、当該編集リストの作成時には所望する映像特殊効果処理に対応するマークを編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、当該マークを映像特殊効果処理の種類に応じた当該種類毎に異なる表示色で表示するようにした。また編集リストを作成でき、編集リストの作成時には所望する映像特殊効果処理に対応するマークを編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、所定の機能モードがオン設定された映像特殊効果処理について、対応するマークを通常の表示色と異なる所定の警告色で表示するようにした。

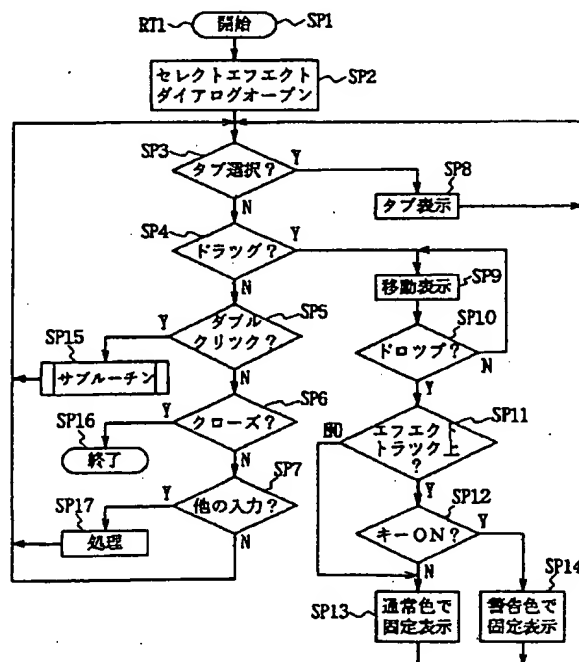


図9 セレクトエフェクトダイアログ処理手順

## 【特許請求の範囲】

【請求項1】登録された複数の映像素材を繋ぎ合わせて所望の編集映像を得るための編集内容を規定した編集リストを作成でき、当該編集リストの作成時には所望する映像特殊効果処理に対応するマークを上記編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、

上記編集リストを作成するための所定の編集リスト作成用画面を表示する表示手段と、

上記マークを上記映像特殊効果処理の種類に応じた当該種類毎に異なる所定の表示色で上記表示手段に表示させる表示制御手段とを具えることを特徴とする編集リスト作成装置。

【請求項2】上記映像特殊効果処理の上記種類毎の各上記マークの上記表示色が同系色に選定されたことを特徴とする請求項1に記載の編集リスト作成装置。

【請求項3】上記表示制御手段は、所定の機能モードがオン設定された上記映像特殊効果処理について、対応する上記マークを上記編集リストの上記所定部位において対応する上記表示色と異なる所定の警告色で上記表示手段に表示させることを特徴とする請求項1に記載の編集リスト作成装置。

【請求項4】上記所定の機能モードは、2つの上記映像素材に基づく各映像を重ねて表示するキーモードでなることを特徴とする請求項3に記載の編集リスト作成装置。

【請求項5】登録された複数の映像素材を繋ぎ合わせて所望の編集映像を得るための編集内容を規定した編集リストを作成でき、上記編集リストの作成時には所望する映像特殊効果処理に対応するマークを上記編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、

上記編集リストを作成するための所定の編集リスト作成用画面を表示する表示手段と、

所定の機能モードがオン設定された上記映像特殊効果処理について、対応するマークを通常の表示色と異なる所定の警告色で上記表示手段に表示させる表示制御手段とを具えることを特徴とする編集リスト作成装置。

【請求項6】上記所定の機能モードは、2つの上記映像素材に基づく各映像を重ねて表示するキーモードでなることを特徴とする請求項5に記載の編集リスト作成装置。

## 【発明の詳細な説明】

## 【0001】

【発明の属する技術分野】本発明は編集リスト作成装置に関し、登録された複数の映像素材を繋ぎ合わせて所望の編集映像を得るための編集内容を規定した編集リストを作成し得るようになされた編集装置に適用して好適な

ものである。

## 【0002】

【従来の技術】従来、この種の編集装置として、図12に示すように、GUI (Graphical User Interface) 画面でなる編集リスト作成画面上にタイムスケール(時間軸)100と、これに沿って設けられた第1のビデオトラック101A、エフェクトトラック101B及び第2のビデオトラック101Cとが表示され、マウス操作により第1及び第2のビデオトラック101A、101C上に所望する映像素材の素材長に応じた第1、第2の枠102A、102Bをタイムスケール100上で連続するように順次表示させるようにして編集リストを作成し得るようになされたものがある。

【0003】そしてかかる編集装置では、第1及び第2の枠101A、101Cがタイムスケール上で重なる位置に位置するように、所望する映像特殊効果処理に応じたアイコン103をエフェクトトラック101B上に表示させることにより、第1の枠102Aに対応する第1の映像素材と、第2の枠102Bに対応する第2の映像素材との切り換わり時に当該映像特殊効果処理を実行するように設定し得るようになされている。

## 【0004】

【発明が解決しようとする課題】ところで一般的に映像特殊効果は、図13(A)のように第1の映像MV1から別の第2の映像MV2に切り替えるトランジション系のもの(例えばワイプ)と、図13(B)のように第1の映像MV1に対して別の第2の映像MV2を一時的に表示するアニメーション系のもの(例えばピクチャ・イン・ピクチャ)との2種類に分けることができる。

【0005】そしてこれらトランジション系及びアニメーション系の各映像特殊効果は、例えばアニメーション系の映像特殊効果では第1の映像MV1よりも第2の映像MV1の方が短い時間である必要があるなど、利用できる映像の組み合わせが異なる。

【0006】ところが上述した従来の編集装置では、各アイコン103にそれぞれ対応する映像特殊効果がトランジション系及びアニメーション系のいずれであるかなどの表示がなされず、オペレータの知識にのみに頼っていた。

【0007】このためかかる編集装置では、オペレータがエフェクトトラック101B上にアイコン103を表示させた段階で呈示されるエラー表示によつてだけしかそのアイコン103に対応する映像特殊効果を使用できるか否かを判別する手立てがなく、また例えばエラー表示された場合には再度所望する映像特殊効果を選択しなければならない問題があった。

【0008】さらに上述した編集装置として、オペレータの使い勝手を向上させることを目的として、映像特殊効果について先行して設定したパラメータ値や各種機能モードをその設定を変更するまで引き継ぐように構築さ

れたものがある。

【0009】しかしながらこのような編集装置では、各種機能モードについて設定されているか否かはエフェクトトラック101B上に表示されたアイコン103を見ても識別できず、各種機能モードがオン設定されていることを意識していないと、編集映像が予期しない状態となることにより装置が故障したと間違え易い問題があった。特に、2つの映像を重ね合わせて表示するいわゆるキー処理は、設定によつては誤解し易いものであった。

【0010】従つて編集装置において、使用しようとする映像特殊効果がトランジション系及びアニメーション系のいずれであるかを容易に識別でき、また映像特殊効果処理について特定の機能モードがオン設定されているか否かを容易に判別し得るようにすることができれば、編集リストの作成作業の作業効率を向上させ得るものと考えられる。

【0011】本発明は以上の点を考慮してなされたもので、編集リストの作成作業の作業効率を格段的に向上させ得る編集リスト作成装置を提案しようとするものである。

【0012】

【課題を解決するための手段】かかる課題を解決するため本発明においては、編集リストを作成でき、当該編集リストの作成時には所望する映像特殊効果処理に対応するマークを編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、マークを映像特殊効果処理の種類に応じた当該種類毎に異なる所定の表示色で表示手段に表示させる表示制御手段を設けるようにした。

【0013】この結果この編集リスト作成装置では、マークの色に基づいて対応する映像特殊効果処理の種類を容易かつ瞬時に判別することができる。

【0014】また本発明においては、編集リストを作成でき、編集リストの作成時には所望する映像特殊効果処理に対応するマークを編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、所定の機能モードがオン設定された映像特殊効果処理について、対応するマークを通常の表示色と異なる所定の警告色で表示手段に表示させる表示制御手段を設けるようにした。

【0015】この結果この編集装置では、表示されたマークの色に基づいて、対応する映像特殊効果処理について所定の機能モードが設定されているか否かを容易にかつ瞬時に判別することができる。

【0016】

【発明の実施の形態】以下図面について、本発明の一実施の形態を詳述する。

【0017】(1) 本実施の形態による編集装置の構成

図1において、1は全体として本実施の形態による編集装置を示し、ビデオテープに記録された映像音声の所望部分をクリップとして登録し得る一方、必要に応じて所望するクリップの映像信号及び音声信号をハードディスク装置2に取り込み得るようになされている。

【0018】またこの編集装置1では、登録された各クリップを所望状態に繋ぎ合わせて所望の編集映像音声を得るための編集内容を規定した編集リストを作成でき、さらにこの作成した編集リストに従つて実際に編集処理を実行し、得られた編集映像及び編集音声をビデオテープに記録することができるようになされている。

【0019】すなわちこの編集装置1は、主制御部3、システム制御部4、映像入力部5、映像出力部6、デジタル映像音声入出力部7、映像特殊効果処理部8、音声入出力/ミキサ部9及びディスク制御部10がコントロールバス11を介して相互に接続されることにより構成されている。

【0020】この場合主制御部3は、初期時、ディスプレイ12に所定の操作画面（以下、これをメイン画面と呼ぶ）を表示させる。また主制御部3は、この状態においてマウス13が操作されることにより、クリップ登録モードが選択され、当該編集装置1に接続された複数台のビデオテープレコーダ14A～14Dのなかから1台のビデオテープレコーダ14A～14Dの再生動作命令が入力されると、これに応じた制御コマンドC1をシステム制御部4に送出する。

【0021】システム制御部4は、供給される制御コマンドC1に基づいて、対応するビデオテープレコーダ14A～14Dに制御信号S1を送出することにより、ビデオテープに記録された映像信号及び音声信号の再生動作を実行させる。

【0022】この結果このビデオテープレコーダ14A～14Dからはアナログ映像信号S2及びアナログ音声信号S3と、デジタル映像信号S4及びデジタル音声信号S5とが出力され、アナログ映像信号S2及びアナログ音声信号S3がそれぞれ映像入力部5又は音声入出力/ミキサ部9に与えられ、デジタル映像信号S4及びデジタル音声信号S5がデジタル映像音声入出力部7に与えられる。

【0023】またこのときシステム制御部4は、コントロールバス11を介して映像入力部5及び音声入出力/ミキサ部9と、デジタル映像音声入出力部7とのうちのいずれか一方を制御することにより、ビデオテープレコーダ14A～14Dから出力されたアナログ映像信号S2及びアナログ音声信号S3と、デジタル映像信号S4及びデジタル音声信号S5とのうちのいずれか一方のみを取り込ませる。

【0024】かくして映像入力部5を介してアナログ映像信号S2が取り込まれた場合には、これが映像入力部5においてデジタル変換された後デジタル映像信号

S6として映像特殊効果処理部8に与えられ、デジタル映像音声入出力部7を介してデジタル映像信号S4が取り込まれた場合には、これがそのまま映像特殊効果処理部8に与えられる。

【0025】映像特殊効果処理部8は、システム制御部4の制御のもとに、映像入力部5又はデジタル映像音声入出力部7から供給されるデジタル映像信号S6、S4を主制御部3に送出する。かくしてこのときディスプレイ12には、主制御部4の制御のもとにデジタル映像信号S6、S4に基づく映像がメイン画面上の所定位置に表示される。

【0026】またこのときアナログ音声信号S3が取り込まれた場合には、これがそのまま音声入出力/ミキサ部9から図示しないスピーカに送出され、またデジタル音声信号S5が取り込まれた場合には、これが音声入出力/ミキサ部9においてアナログ変換された後、スピーカに送出される。

【0027】これによりこの編集装置1では、ディスプレイ12に表示された映像及びスピーカから出力される音声に基づいて、オペレータがマウス13及びキーボード15を用いて映像及び音声の所望部分を指定することができ、さらにこれをクリップとしてそのイン点及びアウト点のタイムコードや素材長(デューレーション)等の関連データを主制御部3内に登録することができるようになされている。

【0028】また主制御部3は、このとき予め取込みモードが選択されている場合には、これに応じた制御コマンドC1をシステム制御部4に送出する。

【0029】システム制御部4は、供給される制御コマンドC1に基づいて、対応するビデオテープレコーダ14A~14Dに制御信号S1を送出することにより、指定されたクリップの映像音声を当該ビデオテープレコーダ14A~14Dに再生させる一方、映像入力部5及び音声入出力/ミキサ部9と、デジタル映像音声入出力部7とのいずれか一方をコントロールバス11を介して制御することにより、ビデオテープレコーダ14A~14Dから出力されるアナログ映像信号S2及びアナログ音声信号S3と、デジタル映像信号S4及びデジタル音声信号S5とのうちのいずれか一方を取り込ませる。

【0030】この結果映像入力部5を介してアナログ映像信号S2が取り込まれた場合には、これが映像入力部5においてデジタル変換された後デジタル映像信号S6として映像特殊効果処理部8を介してディスク制御部10に送出され、デジタル映像音声入出力部7を介してデジタル映像信号S4が取り込まれた場合には、これがそのままディスク制御部10に送出される。

【0031】またこのとき音声入出力/ミキサ部9を介してアナログ音声信号S3が取り込まれた場合には、これが音声入出力/ミキサ部9においてデジタル変換さ

れた後デジタル音声信号S7としてディスク制御部10に送出され、デジタル映像音声入出力部9を介してデジタル音声信号S5が取り込まれた場合には、これが直接ディスク制御部10に送出される。

【0032】そしてディスク制御部10は、このときシステム制御部4からコントロールバス11を介して与えられるコマンドに基づいて、映像特殊効果処理部8又はデジタル映像音声入出力部7から与えられるデジタル映像信号S6、S4と、音声入出力/ミキサ部9又はデジタル映像音声入出力部7から与えられるデジタル音声信号S7、S5とを順次取り込み、これらをハードディスク装置2に与えてハードディスクの指定されたアドレス位置に記録させる。

【0033】このようにしてこの編集装置1においては、指定されたクリップの映像音声をビデオテープから再生してハードディスク装置2に取り込むことができるようになされている。

【0034】一方主制御部3は、上述のようにしてクリップが登録されると、ディスプレイ12に表示されているメイン画面内に、登録されたクリップのリストを表示させる。

【0035】そしてオペレータは、このメイン画面を用いてどのクリップとどのクリップとをどのように繋ぎ合わせるかといった編集内容を規定した編集データを編集リストとして作成することができる。またオペレータは、編集リストの作成後又は作成途中において、その編集リストに基づく編集映像及び編集音声を確認することができる。

【0036】實際上、主制御部3は、編集リストの作成後又は作成途中において、その編集リストに基づく編集映像音声のプレビューモードが選択されると、これに応じた制御コマンドC1をシステム制御部4に送出する。

【0037】システム制御部4は、供給される制御コマンドC1に基づいて、必要に応じて対応するビデオテープレコーダ14A~14Dに制御信号S1を送出することにより当該ビデオテープレコーダ14A~14Dに編集処理に利用するクリップの映像音声を再生させる一方、必要に応じてコントロールバス11を介してディスク制御部10を制御することにより、編集処理に利用するクリップの映像音声をハードディスク装置2から再生させる。

【0038】この結果このビデオテープレコーダ14A~14Dからは指定されたクリップのアナログ映像信号S2及びアナログ音声信号S3と、デジタル映像信号S4及びデジタル音声信号S5とが出力され、アナログ映像信号S2及びアナログ音声信号S3がそれぞれ映像入力部5又は音声入出力/ミキサ部9に与えられ、デジタル映像信号S4及びデジタル音声信号S5がデジタル映像音声入出力部7に与えられる。

【0039】このときシステム制御部4は、コントロー



ルバス11を介して映像入力部5及び音声入出力/ミキサ部9と、デジタル映像音声入出力部7とのうちのいずれか一方を制御することにより、ビデオテープコーダ14A~14Dから出力されたアナログ映像信号S2及びアナログ音声信号S3と、デジタル映像信号S4及びデジタル音声信号S5とのうちのいずれか一方のみを取り込ませる。

【0040】かくして映像入力部5を介してアナログ映像信号S2が取り込まれた場合には、これが映像入力部5においてデジタル変換された後デジタル映像信号S6として映像特殊効果処理部8に与えられ、デジタル映像音声入出力部7を介してデジタル映像信号S4が取り込まれた場合には、これがそのまま映像特殊効果処理部8に与えられる。

【0041】映像特殊効果処理部8においては、システム制御部4の制御のもとに、供給される各クリップのデジタル映像信号S6、S4を必要に応じて指定された状態に特殊効果加工処理する。また映像特殊効果処理部8は、このとき主制御部4から必要に応じて与えられるタイトル文字や各種グラフィック等の画像データを各クリップのデジタル映像信号S6、S4間に挿入し、又はデジタル映像信号S6、S4に重畳し、かくして得られたデジタル編集映像信号S8を映像出力部6に送出する。

【0042】映像出力部6は、システム制御部4の制御のもとに、供給されるデジタル編集映像信号S8をアナログ変換し、得られた編集映像信号S9をモニタ16に送出する。

【0043】一方このときビデオテープコーダ14A~14Dから出力されたアナログ音声信号S3及びデジタル音声信号S5のうち、音声入出力/ミキサ部9を介してアナログ音声信号S3が取り込まれた場合には、これが音声入出力/ミキサ部9において必要に応じてミキシング等の編集処理が施された後編集音声信号としてスピーカに送出され、デジタル映像音声入出力部7を介してデジタル音声信号S5が取り込まれた場合には、これが音声入出力/ミキサ部9においてアナログ変換され、ミキシング等の編集処理が施された後、編集音声信号としてスピーカに送出される。

【0044】この結果この編集装置1においては、モニタ16に編集映像信号S9に基づく編集映像が表示されると共にスピーカから編集音声信号に基づく編集音声が出力され、かくしてオペレータが編集リストに基づく編集映像及び編集音声を確認することができる。

【0045】さらに主制御部3は、編集リストが作成された後、マウス13又はキーボード15が操作されてその実行命令が入力されると、これに応じた制御コマンドC1をシステム制御部4に送出する。

【0046】システム制御部4は、供給される制御コマンドC1に基づいて、必要に応じて対応するビデオテ

プレコーダ14A~14Dに制御信号S1を送出することにより当該ビデオテープコーダ14A~14Dに編集処理に利用するクリップの映像音声を再生させる一方、必要に応じてコントロールバス11を介してディスク制御部10を制御することにより、ハードディスク装置2から編集処理に利用するクリップの映像音声を再生させる。

【0047】この結果上述のプレビューモード時と同様にして、映像特殊効果処理部8には、ビデオテープコーダ14A~14Dから映像入力部5若しくはデジタル映像音声入出力部7を経由して必要なクリップのデジタル映像信号S6、S4が与えられ、又はハードディスク装置2からディスク制御部10を経由して必要なクリップのデジタル映像信号S6、S4が与えられる。

【0048】またこのとき音声入出力/ミキサ部9には、ビデオテープコーダ14A~14Dから直接若しくはデジタル映像音声入出力部7を経由して必要なクリップのアナログ音声信号S3若しくはデジタル音声信号S5が与えられ、又はハードディスク装置2からディスク制御部10を経由して必要なクリップのデジタル音声信号S7、S5が与えられる。

【0049】そして映像特殊効果処理部8は、システム制御部4の制御のもとに、上述のプレビューモード時と同様にして、供給される各クリップのデジタル映像信号S6、S4を必要に応じて特殊効果加工処理し、かくして得られた編集映像の映像信号でなるデジタル編集映像信号S8を映像出力部6に送出する。

【0050】映像出力部6は、システム制御部4の制御のもとに、供給されるデジタル編集映像信号S8をアナログ変換し、得られた編集映像信号S9を対応するビデオテープコーダ14A~14Dに送出する。

【0051】またこのとき音声入出力/ミキサ部9は、システム制御部の制御のもとに、上述のプレビューモード時と同様にして、供給される各クリップのアナログ音声信号S2又はデジタル音声信号S5、S7に対して必要に応じてミキシング等の編集処理を施し、かくして得られた編集音声信号S10を対応するビデオテープコーダ14A~14Dに送出する。

【0052】ビデオテープコーダ14A~14Dは、システム制御部4から与えられる制御信号S1に基づいて、これら映像出力部6から供給される編集映像信号S9と、音声入出力/ミキサ部9から供給される編集音声信号S10とをビデオテープの指定された位置に記録する。

【0053】このようにしてこの編集装置1では、作成された編集リストに従って指定されたクリップの映像音声を指定された状態に編集加工してビデオテープに記録することができるようになされている。

【0054】(2)主制御部の構成

ここで主制御部3は、図2に示すように、CPU (Cent

ral Processing Unit) 20、ROM (Read Only Memory) 21、RAM (Random Access Memory) 22、表示処理部23、タイトル/グラフィック生成部24、インターフェース回路25、26及びSCSI (Small Computer System Interface) インターフェース回路28がCPUバス27を介して接続されることにより構成されており、各インターフェース回路25、26をそれぞれ介してマウス13及びキーボード15と接続され、SCSI インターフェース回路28を介してハードディスク装置17と接続されている。

【0055】この場合CPU20は、ROM21に格納されたプログラムに基づいて、必要に応じてROM21内の画像データを読み出し、これを表示処理部23を介してディスプレイ12に与えることにより、後述のようなメイン画面や各種ダイアログ、マウス操作に応動してメイン画面内を移動するカーソル及びキーボード15を介して入力された数字や文字などをディスプレイ12に表示させ、かつ映像特殊効果処理部8からタイトル/グラフィック生成部24を介して表示処理部23に与えられるデジタル映像信号S6、S4に基づく映像や静止

20 画像をメイン画面内の所定位置に表示させる。  
【0056】またCPU20は、例えばマウス13やキーボード15が操作されることにより所定処理の実行命令がインターフェース回路25、26を介して与えられると、ROM21に格納されたプログラムに基づいて、必要に応じてシステム制御部4に制御コマンドC1を送出することにより、当該システム制御部4を介して対応するビデオテーブルコード14A~14D、映像入出力部5、映像出力部6、デジタル映像音声入出力部7、映像特殊効果処理部8、音声入出力/ミキサ部9及び又はディスク制御部10に所定動作を実行させ、かくして編集装置1全体として上述したような各種処理を実行させる。

【0057】さらにCPU20は、ROM21に格納されたプログラムに基づいて、必要時にはタイトル/グラフィック生成部24を制御してタイトル文字やグラフィックの画像データを生成させてこれを映像特殊効果処理部8に送出させ、かくしてこれらタイトル文字やグラフィックを編集映像に反映させるようになされている。

【0058】(3) メイン画面における操作手順  
ここで實際上CPU20は、電源が投入された立ち上がり時、ROM21に格納されているプログラムに基づいて、まず図3に示すようなメイン画面30をディスプレイ12に表示させる。

【0059】このメイン画面30には、オペレータが所望する処理内容を選択するための複数のボタン31A~31Qと、登録された各クリップのリスト等を表示するためのクリップ情報表示部32と、編集リスト作成時における各種処理を指定するための複数のボタン33A~33Tと、編集リストを作成するための編集リスト作成

部35とが設けられている。

【0060】そしてこのメイン画面30では、画面上段のビデオクリップエディットボタン31Kをクリックすることによって、図4のようなダイアログ（以下、これをビデオクリップエディットダイアログと呼ぶ）40をメイン画面30上に重ねて表示させることができる。

【0061】この場合ビデオクリップエディットダイアログ40では、左側上段に各ビデオテーブルコード14A~14Dにそれぞれ対応させてソース選択ボタン41A~41Dが複数表示されており、マウス操作によりこれらソース選択ボタン41A~41Dのうちのいずれか1つをクリックすることにより所望の1台のビデオテーブルコード14A~14Dを選択することができる。

【0062】そしてオペレータは、いずれかのソース選択ボタン14A~14Dを選択した後、当該ビデオクリップエディットダイアログ40内に表示されたいずれかのビデオ操作ボタン42A~42Gをクリックすることによって、対応するビデオテーブルコード14A~14Dに選択したビデオ操作ボタン42A~42Gに応じた動作を実行させることができる。なおビデオクリップエディットダイアログ40内のスライダ43をドラッグ操作することによっても、同様にして対応するビデオテーブルコード14A~14Dに再生動作を実行させることができる。そしてこのときビデオテーブルコード14A~14Dに再生動作や変速再生動作を実行させた場合、当該ビデオテーブルコード14A~14Dによりビデオテープから再生された映像がこのビデオクリップエディットダイアログ40内のライブ映像表示部44内に表示される。

【0063】かくしてオペレータは、このライブ映像表示部44内に表示された映像を目視確認しながらイン点指定用ボタン45又はアウト点指定用ボタン46をクリックすることによってクリップとして登録しようとする映像部分のイン点及びアウト点を指定することができる。そしてこのとき指定されたイン点及びアウト点の画像がそれぞれイン点画像表示部47又はアウト点画像表示部48内に表示される。

【0064】またこのときイン点又はアウト点として指定された各画像のビデオテープにおけるタイムコードがそれぞれイン点タイムコード表示部49又はアウト点タイムコード表示部50にそれぞれ表示され、指定されたクリップの素材長（デユレーション）がデユレーション表示部51に表示される。

【0065】なおビデオクリップエディットダイアログ40では、コマ送りボタン52A、52Bをクリックすることによって、ライブ映像表示部44内に表示された映像を順方向又は逆方向にコマ送り表示させることができ、またライブ映像移動ボタン53、54をクリックすることによってライブ映像表示部44内の表示画像をイン点又はアウト点まで移動させることができる。

【0066】そしてオペレータは、上述のようにしてクリップのイン点及びアウト点を指定した後登録ボタン55をクリックすることによつて、その映像のイン点からアウト点までの部分をクリップとして登録することができる。

【0067】このときディスプレイ12に表示されているそのクリップのイン点及びアウト点のタイムコードや、素材長及び保存位置（ビデオテープ又はハードディスク装置2内）等の関連データがデータベースとしてRAM22に取り込まれる。またこのようにして登録したクリップのイン点及びアウト点のタイムコードや素材長等の関連データが図5のようにメイン画面30のクリップ情報表示部32内に表示される。

【0068】さらにこのとき例えばビデオクリップエディットダイアログ40のモアボタン56を選択することによつて開くことのできる図示しない設定画面上で予め取込みモードを選択している場合には、このクリップの映像音声が上述のようにしてハードディスク装置2に取り込まれ、かつそのクリップの保存位置がハードディスク装置2内であることを表すデータ（例えばフラグ）がデータベース内の対応する位置に格納される。

【0069】因にこのときこの編集装置1では、このクリップの映像信号及び音声信号を指定された範囲（すなわち指定されたイン点からアウト点まで）よりも前後所定時間分（例えば2秒分）だけ余分にハードディスク装置2に取り込まれる。またこのとき例えば上述の設定画面上で予めリンクモードを選択している場合には映像及び音声データとしてリンクしてハードディスク装置2に取り込まれる一方、ノンリンクモードを選択している場合には映像及び音声データとしてリンクされないでハードディスク装置2に取り込まれる。

【0070】そしてビデオクリップエディットダイアログ40では、ニューエディットボタン57をクリックすることによつて初期状態に戻すことができ、これによりオペレータがこの後上述と同様の手順により他のクリップを順次登録することができる。またこのビデオクリップエディットダイアログ40はクローズボタン58をクリックすることによつてクローズさせることができる。

【0071】一方オペレータは、上述のようにしてメイン画面30のクリップ情報表示部32に登録されたクリップのリストが表示された状態（図5）において、このメイン画面30の編集リスト作成部35を利用して以下の方法により編集リストを作成することができる。

【0072】この場合まずマウス操作によりクリップ情報表示部32内の所望のクリップの段にカーソルを合わせた後、マウス13のボタンを押下するようにして1つのクリップを指定し、その状態のままカーソルを、編集リスト作成部35のタイムスケール35Aを指標として、第1又は第2のビデオトラック35C、35E内の所望位置に移動させた後、マウス13のボタンを放すよ

うにする。

【0073】この結果図6に示すように、この第1又は第2のビデオトラック35C、35E内にそのときのカーソルの位置を先頭として、上述のようにして指定されたクリップの素材長に応じた長さの枠60A～60Dが表示される。またこのときそのクリップの映像と音声とがリンクされて登録されている場合には、その枠60A～60Dが表示された第1又は第2のビデオトラック35C、35Dと対応する第1又は第2のオーディオトラック35G、35H上に第1又は第2のビデオトラック35C、35E内に表示された枠60A～60Dとタイムスケール35A上で同じ位置に同じ長さの枠61A～61Dが表示される。

【0074】そしてオペレータは、上述のような操作を繰り返して行い、タイムスケール35Aの最初のタイムコード（「00:00:00:00」）から所望するタイムコードまで（すなわち所望する時間分だけ）タイムスケール35A上において連続するように、第1又は第2のビデオトラック35C、35Eと、第1又は第2のオーディオトラック35G、35Hとに順次枠60A～60D、61A～61Dを表示させるようにする。

【0075】ここでこのように編集リスト表示部35の第1又は第2のビデオトラック35C、35Eや、第1又は第2のオーディオトラック35G、35Hに枠60A～60D、61A～61Dが表示されることは、編集映像音声の出力時にタイムスケール35Aで表された時間にその枠60A～60D、61A～61Dに対応するクリップの映像が表示され又は音声出力されることを意味する。従つてこのような操作により編集映像として表示され、又は編集音声として出力されるクリップ映像又は音声を順次規定してなる編集リストを作成することができる。

【0076】またこのようにして編集リストを作成する際、例えば第1のクリップの映像から第2のクリップの映像への切り換わり時に映像特殊効果処理を施したいとき（すなわちトーンション系の映像特殊効果処理を施したいとき）には、先行する第1のクリップに対応する第1の枠60Aを一方の第1又は第2のビデオトラック35C、35Eに表示させると共に、当該第1の枠60Aの後側の一部とその前側の一部がタイムスケール35Aでのタイムコードが重なるように、後行する第2のクリップに対応する第2の枠60Bを他方の第2又は第1のビデオトラック35E、35C上に表示させる。

【0077】続いて画面中段部のセレクトエフェクトボタン33Rをクリックする。この結果メイン画面30上に、例えば図7のような実行できる各種映像特殊効果処理の内容を表すアイコン（以下、これらをエフェクトアイコンと呼ぶ）63A～63Yが複数表示された所定のダイアログ（以下、これをセレクトエフェクトダイアログと呼ぶ）62を表示させることができる。

【0078】なおこのセレクトエフェクトダイアログ62では、実行できる各種映像特殊効果処理がいくつかのタイプ（「Cut」、「Dissolve」、「Wipe」、「2D」、「Screen」、「3D」及び「PinP」）に分類されると共に、各タイプにそれぞれ対応させてタブ64A～64Gが設けられ、これらタブ64A～64Gの中から所望するタイプに対応するタブ64A～64Gをクリックすることによって対応するタイプの各種映像特殊効果処理のエフェクトアイコン63A～63Yを、それまで表示されていたタイプの各映像特殊効果処理のエフェクトアイコン63A～63Yに代えてセレクトエフェクトダイアログ62内に表示させることができる。

【0079】そしてオペレータは、上述のようにして所望するトランジション系の映像特殊効果処理のエフェクトアイコン63A～63Gをセレクトエフェクトダイアログ内に表示させた後、当該エフェクトアイコン63A～63G上にカーソルを移動させ、この後マウス13のボタンを押下し、その状態でカーソルを上述の編集リスト作成部35のエフェクトトラック35Dにおける第1及び第2の枠60A、60Bがタイムスケール35A上でタイムコードが重なり合う部分に移動させてマウス13のボタンを放す（ドラッグアンドドロップ）するようにする。

【0080】この結果セレクトエフェクトダイアログ62内のドラッグされたエフェクトアイコン63A～63Yが画面上をカーソルと一体に移動してドロップされた位置に貼り付けられた状態に表示される。

【0081】これにより一方の第1又は第2のビデオトラック35C、35Eに表示された第1の枠60Aに対応するクリップの映像と、他方の第2又は第1のビデオトラック35E、35Cに表示された第2の枠60Bに対応するクリップの映像との繋ぎ部分において上述のようにして貼り付けられたエフェクトアイコン63A～63Yに応じた映像特殊効果処理を実行すべき旨の指示を入力することができる。

【0082】一方例えば第1のクリップの映像の途中で、他の第2のクリップの映像を一時的に表示させる映像特殊効果処理を施したいとき（すなわちアニメーション系の映像特殊効果処理を施したいとき）には、第1のクリップに対応する第1の枠60Dを一方の第1又は第2のビデオトラック35C、35Eに表示させると共に、タイムスケール上において当該第1の枠60Dからはみ出さないように、第2のクリップに対応する第2の枠60Cを他方の第2又は第1のビデオトラック35E、35C上に表示させる。

【0083】続いて画面中段部のセレクトエフェクトボタン33Rをクリックすることによりセレクトエフェクトダイアログ62をオープンさせ、この後所望するアニメーション系の映像特殊効果処理のエフェクトアイコン63A～63Yをセレクトエフェクトダイアログ62内

に表示させた後、当該エフェクトアイコン63A～63Yをドラッグアンドドロップにより編集リスト作成35のエフェクトトラック35Dにおける第2の枠60Cの一端部とタイムスケール35A上で重なる位置に移動させて表示させる。またこれと同様に同じエフェクトアイコン63A～63Yを編集リスト作成35のエフェクトトラック35Dにおける第2の枠60Cの他端部とタイムスケール35A上で重なる位置に移動させて表示させる。

10 【0084】これにより一方の第1又は第2のビデオトラック35C、35Eに表示された第1の枠60Dに対応するクリップの映像の途中において、他方の第2又は第1のビデオトラック35E、35Cに表示された第2の枠60Cに対応するクリップの映像を、編集リスト作成部35のエフェクトトラック35Dに表示されたエフェクトアイコン63A～63Yに応じた映像特殊効果処理により一時的に表示させるべき旨の指示を入力することができる。

20 【0085】なおセレクトエフェクトダイアログ62は、その右側に複数表示されたボタン65A～65Eのうちのクローズボタン65Aをクリックすることによりクローズさせることができる。

【0086】さらにこのようにして編集リストを作成した後又は編集リストの作成時に、メイン画面30の画面中段に表示されたプレビューボタン33Dをクリックしてプレビューモードを選択することによって、上述のようにこの編集リストに基づく編集映像をモニタ16（図1）に表示させ、また当該編集リストに基づく編集音声

30 【0087】また上述のようにして編集リストを作成した後、メイン画面30の画面中段に表示された記録ボタン33Gをクリックして記録モードを選択することによって、上述のように当該編集リストに基づく編集処理を実行させ、かくして得られた編集映像及び編集音声を予め指定したビデオテープレコーダ14A～14Dを介してビデオテープに記録させることができる。

【0088】かかる構成に加えてこの編集装置1の場合、メイン画面30上及びセレクトエフェクトダイアログ62上において、トランジション系の映像特殊効果処理のエフェクトアイコン63A～63Yと、アニメーション系の映像特殊効果処理のエフェクトアイコン63A～63Yとが異なる色で表示される。これによりこの編集装置1では、各エフェクトアイコン63A～63Yの色に基づいて対応する映像特殊効果処理がトランジション系及びアニメーション系のいずれであるかをオペレータが容易にかつ瞬時に判別し得るようになされている。

【0089】なおこの場合この編集装置1では、トランジション系の映像特殊効果処理に対応するエフェクトアイコン63A～63Yは背景以外の部分が青（R=0、G=0、B=128）で表示され、アニメーション系の映

像特殊効果処理に対応するエフェクトアイコン63A~63Yは背景以外の部分がシアン(R=0、G=128、B=128)で表示される。

【0090】このようにこの編集装置1においては、トランジション系の映像特殊効果処理に対応するエフェクトアイコン63A~63Yと、アニメーション系の映像特殊効果処理に対応するエフェクトアイコン63A~63Yの表示色として同系色を選定することにより、これらトランジション系の映像特殊効果処理に対応するエフェクトアイコン63A~63Yと、アニメーション系の映像特殊効果処理に対応するエフェクトアイコンとのイメージがかけ離れないように、なるべく近いイメージで表示し得るようになされている。

【0091】またこの編集装置1の場合、セレクトエフェクトダイアログ62のユーザテンプレート66上又は編集リスト作成部35のエフェクトトラック35D上に移動されたエフェクトアイコン63A~63Yをダブルクリックすることにより、図8のようなエフェクトセットアップダイアログ70をメイン画面30上に重ねて表示させることができる。

【0092】そしてオペレータは、このエフェクトセットアップダイアログ70を用いて指定した(ダブルクリックした)エフェクトアイコン63A~63Yに対応する映像特殊効果処理について、各種パラメータ値の設定又は変更や、1つの映像に別の映像を重ねて表示するキーモードなどの各種機能モードの設定又は解除を行うことができる。

【0093】この場合この編集装置1では、このようにして設定された各種パラメータ値及び各種機能モードの設定の有無が主制御部3のRAM22に記憶保持され、この記憶保持された各種パラメータ値及び各種機能モードの設定の有無がこの後この映像特殊効果処理が用いられるときに引き継がれる。

【0094】このためこの編集装置1では、このような各種機能モードのうちの特に故障と間違えられやすいキーモードがオン設定されている場合には、その映像特殊効果処理のエフェクトアイコン63A~63Yがドラッグアンドドロップにより編集リスト作成部35のエフェクトトラック35D上に固定表示された段階において、当該エフェクトアイコン63A~63Yを通常色(トランジション系では青、アニメーション系ではシアン)と異なる警告色で表示するようになされている。

【0095】これによりこの編集装置1においては、編集リスト作成部35のエフェクトトラック35D上に表示されたエフェクトアイコン63A~63Yの表示色に基づいて、対応する映像特殊効果処理についてキーモードがオン設定されているか否かをオペレータが容易にかつ瞬時に判別することができ、かくしてキーモードの誤設定に起因する編集映像の不具合の発生を未然に防止し得るようになされている。

【0096】なおこの実施の形態の場合、エフェクトアイコン63A~63Yが編集リスト作成部35のエフェクトトラック35D上に固定表示された状態において、対応する映像特殊効果処理について後述のエフェクトセットアップダイアログ70(図8)を用いてキーモードをオン設定した場合には、当該エフェクトセットアップダイアログ70をクローズした段階において当該エフェクトアイコン63A~63Yを上述と同じ警告色で表示する。

【0097】そしてこの場合このような警告色としては、その映像特殊効果処理がトランジション系及びアニメーション系のいずれであるかに関わりなくマゼンダ(R=128、G=0、B=128)が選定されており、従ってキーモードがオン設定されている場合には対応するエフェクトアイコン63A~63Yが編集リスト作成部35のエフェクトトラック35Dに固定表示された段階又はエフェクトセットアップダイアログ70がクローズした段階において、当該エフェクトアイコン63A~63Yの背景以外の部分がマゼンダ色で表示される。

20 【0098】(4)映像特殊効果処理の各種詳細設定  
ここでこの編集装置1の場合、上述のようにセレクトエフェクトダイアログ62のユーザテンプレート66上又は編集リスト作成部35のエフェクトトラック35D上に移動されたエフェクトアイコン63A~63Yをダブルクリックすることにより、図8に示すエフェクトセットアップダイアログ70をメイン画面30上に重ねて表示することができる。

【0099】この場合エフェクトセットアップダイアログ70には複数のタブ72A~72Gが設けられており、これらタブ72A~72Gの中からマウス操作により所望するタブ72A~72Gを選択することによつて、これらタブ72A~72Gにそれぞれ対応する各種パラメータ値の設定及び変更や、各種機能モードの設定及び解除を行うことができる。

【0100】實際上、エフェクトセットアップダイアログ70において、例えばエッジタブ72Aを選択した場合には、設定内容表示欄73内に図8のようにソフトエッジ設定欄74と、ボーダ設定欄75とが表示される。このときソフトエッジ設定欄74内には、「OFF」及び「ON」の文字と、これらの文字にそれぞれ対応させてい

40 ずれか一方のみをオン状態とすることのできる第1及び第2の選択ボタン76A、76Bが表示される。  
【0101】そしてオペレータは、第1及び第2の選択ボタン76A、76Bのいずれか一方をマウス操作により選択することができ、例えば第2の選択ボタン76Bを選択することによりソフトエッジ処理(例えばワイプ時における2つの映像の境界又は2つの映像の境界に表示されたラインのエッジをぼかす処理)を実行させるように設定することができる。

50 【0102】またソフトエッジ設定欄74の第2の選択

ボタン 76B を選択した場合、そのほかす幅の値（パラメータ値）をキーボード 15（図 1）を介して入力することができ、このとき入力されたパラメータ値がソフトウェア設定表示部 77 内に表示される。なおこのパラメータ値は、対応するアップダウンボタン 78A、78B を用いて 0～255 の範囲内で自在に増減させることができる。

【0103】一方エッジタブ 72A では、ボーダ設定欄 75 内にも「OFF」及び「ON」の文字と、これらの文字にそれぞれ対応させていずれか一方のみをオン状態とすることのできる第 1 及び第 2 の選択ボタン 79A、79B が表示される。

【0104】そしてオペレータは、マウス操作により第 1 及び第 2 の選択ボタン 79A、79B のいずれか一方を選択することができ、例えば第 2 の選択ボタン 79B を選択することによりボーダ表示処理（例えばワイプ時における 2 つの映像の境界にラインを表示する処理）を実行させるように設定することができる。

【0105】またボーダ設定欄 75 の第 2 の選択ボタン 79B を選択した場合、そのラインの幅（Width）やラインの色相（Hue）、彩度（Sat）及び輝度（Lum）のパラメータ値をキーボード 15 を用いて設定することができ、このとき入力したパラメータ値がそれぞれ対応する幅設定表示部 80、色相設定表示部 81A、彩度設定表示部 81B 及び輝度設定表示部 81C 内に表示され、このようにして設定した色相、彩度及び輝度に基づく色が色設定表示部 82 内に表示される。なお幅設定表示部 80、色相設定表示部 81A、彩度設定表示部 81B 及び輝度設定表示部 81C に表示された各パラメータ値は、それぞれ対応するアップダウンボタン 83A～83H を用いて自在に増減することができる。

【0106】一方エフェクトセットアップダイアログ 70 では、選択されたタブ 72A～72G の種類に関わりなく、その右側にはこのエフェクトセットアップダイアログ 70 をオープンさせるに際して指定（ダブルクリック）したエフェクトアイコン 63A～63Y の番号（Pattern No.、図 7 の各エフェクトアイコン 63A～63Y の下側に表示された数値）と、そのエフェクトアイコン 63A～63Y の編集リスト作成部 35 のエフェクトトラック 35D における先頭のタイムコード（Start Point）とがそれぞれパターン番号表示部 84 及びスタートポイント表示部 85 内に表示される。

【0107】またエフェクトセットアップダイアログ 70 では、これと共にその右側にトランジション設定表示欄 86 及びファンクション設定表示欄 87 が表示され、トランジション設定表示欄 86 内にそのエフェクトアイコン 63A～63Y に応じた映像特殊効果処理を施すべきフレーム数を表示するフレーム数表示部 88 と、特殊効果処理された映像をモニタに表示させるリバースモードを設定又は解除するためのリバースチェックボックス

89 と、リバースモード時において特殊効果処理された映像の再生命令を入力するためのオートリバーストランジションボタン 91 と、そのときの再生速度を調整するための調整バー 90 とが表示される。

【0108】さらにファンクション設定表示欄 87 内には、キー処理、トレイル処理及びライティング処理を設定又は解除するための第 1～第 3 のチェックボックス 91A～91B が表示される。そして所望する機能モードを設定する場合には対応する第 1～第 3 のチェックボックス 91A～91C 内をクリックするようにする。この結果クリックされた第 1～第 3 のチェックボックス 91A～91C 内にチェックマーク 92 が表示されてその機能モードがオン設定される。

【0109】なおオン設定された機能モードを解除する場合には、チェックマーク 92 が表示された対応する第 1～第 3 のチェックボックス 91A～91C をクリックするようにする。この結果チェックマーク 92 が消去されてその機能モードがオフ設定される。

【0110】さらにエフェクトセットアップダイアログ 70 では、その右下側にデフォルトボタン 93A、OK ボタン 93B、キャンセルボタン 93C 及びヘルプボタン 93D がそれぞれ表示される。そしてエフェクトセットアップダイアログ 70 では、例えばデフォルトボタン 93A をクリックすることによつて、設定内容表示欄 73 の各設定表示部 74、75 内に表示されたパラメータ値を予め設定されている初期値に戻すことができる。

【0111】また OK ボタン 93B をクリックすることによつて、設定内容表示欄 73 において設定した各パラメータ値を取り込ませて記憶保持させた後、このエフェクトセットアップダイアログ 70 をクローズさせることができる。なおこのようにして記憶保持された各パラメータ値や各種機能モードの設定は、この後の編集処理時に反映される。

【0112】さらにエフェクトセットアップダイアログ 70 では、キャンセルボタン 93C をクリックすることによつて、このエフェクトセットアップダイアログ 70 を用いて設定し又は入力した各種機能モードやパラメータ値を全て破棄させた後（すなわち内部処理として設定モード変更処理やパラメータ値変更処理を行うことなく）、このエフェクトセットアップダイアログ 70 をクローズさせることができる。そしてさらにヘルプボタン 93D をクリックすることによつて、所定のヘルプ情報をこのエフェクトセットアップダイアログ 70 上に重ねて表示させることができる。

【0113】（5）CPU 20 の各種処理手順  
ここで實際上、主制御部 3 の CPU 20 は、セレクトエフェクトダイアログ 62 における上述のような処理を図 9 に示すセレクトエフェクトダイアログ処理手順 RT1 に従つて処理する。

【0114】すなわち CPU 20 は、編集リスト作成モ

ード時、メイン画面30のセレクトエフェクトボタン33Rがクリックされると、このセレクトエフェクトダイアログ処理手順RT1をステップSP1において開始し、続くステップSP2においてセレクトエフェクトダイアログ62をメイン画面30上に重ねて表示させる。

【0115】このときCPU20は、RAM22に格納されている各映像特殊効果処理のエフェクトアイコン63A~63Yの画像データに基づいて、オープンした初期状態においてセレクトエフェクトダイアログ62内に表示すべき各エフェクトアイコン63A~63Yについて、トランジション系の映像特殊効果処理のエフェクトアイコン63A~63Yを青色で表示し、アニメーション系の映像特殊効果処理のエフェクトアイコン63A~63Yをシアンで表示する。

【0116】次いでCPU20は、ステップSP3に進んでこの後ステップSP3~ステップSP7において、いずれかのタブ64A~64Gが選択されたか否か、セレクトエフェクトダイアログ62内に表示されているいずれかのエフェクトアイコン63A~63Yがドラッグされたか否か、セレクトエフェクトダイアログ62内のユーザテンプレート66上に表示されたエフェクトアイコン63A~63Yがダブルクリックされたか否か、セレクトエフェクトダイアログ62のクローズボタン65Aがクリックされたか否か、他のボタン65B~65Eがクリックされるなどして他の入力があつたか否かを順次判断する。

【0117】そしてCPU20は、ステップSP3~ステップSP7において全て否定結果を得るとステップSP3に戻り、この後ステップSP3~ステップSP7のいずれかにおいて肯定結果を得るまでステップSP3-SP4-SP5-SP6-SP6-SP7-SP3のループを繰り返す。

【0118】これに対してCPU20は、ステップSP3において肯定結果を得ると、ステップSP8に進んでそのタブ64A~64Gを表示した後ステップSP3に戻る。このときCPU20は、RAM22に格納されている各エフェクトアイコン63A~63Yの画像データに基づいて、トランジション系の映像特殊効果処理の各エフェクトアイコン63A~63Yをセレクトエフェクトダイアログ62内の対応する位置に青色でそれぞれ表示し、アニメーション系の映像特殊効果処理の各エフェクトアイコン63A~63Yをセレクトエフェクトダイアログ62内の対応する位置にシアン色で表示する。

【0119】またCPU20は、ステップSP4において肯定結果を得ると、ステップSP9に進んで対応するエフェクトアイコン63A~63Yをカーソルと一体にメイン画面30上を移動するように移動表示させる。またCPU20は、続くステップSP10においてそのエフェクトアイコン63A~63Yがドロップされたか否かを判断して否定結果を得るとステップSP9に戻り、

この後このステップSP10において肯定結果を得るまでステップSP9-SP10-SP9のループを繰り返す。

【0120】そしてCPU20は、やがてステップSP10において肯定結果を得ると、ステップSP11に進んでそのエフェクトアイコン63A~63Yがドロップされたのがメイン画面30の編集リスト作成部35のエフェクトトラック35D上であつたか否かを判断し、否定結果を得るとステップSP13に進み、これに対して肯定結果を得ると、ステップSP12に進んでそのエフェクトアイコン63A~63Yに対応する映像特殊効果処理についてキーモードがオン設定されているか否かを判断する。

【0121】そしてCPU20は、このステップSP12において否定結果を得ると、ステップSP13に進んでそのエフェクトアイコン63A~63Yを通常色でドロップされた位置に固定表示した後ステップSP3に戻り、これに対して肯定結果を得ると、ステップSP14に進んでそのエフェクトアイコン63A~63Yをマゼンダで表示した後ステップSP3に戻る。

【0122】一方CPU20は、ステップSP5において肯定結果を得るとステップSP15に進んで図10に示す第1のエフェクトセットアツプダイアログ処理手順RT2を選択し、当該エフェクトセットアツプダイアログ処理手順RT2に従つて上述のようなエフェクトセットアツプダイアログ70における各種処理を実行した後、ステップSP3に戻る。

【0123】またCPU20は、ステップSPにおいて肯定結果を得るとステップSP16に進んでセレクトエフェクトダイアログ62をクローズした後このセレクトエフェクトダイアログ処理手順RT1を終了し、これに対してステップSP7において肯定結果を得ると、ステップSP17に進んで対応する処理を実行した後ステップSP3に戻る。

【0124】なおCPU20は、ステップSP16において第1のエフェクトセットアツプダイアログ処理手順RT2(図10)を選択した場合、これをステップSP20において開始し、続くステップSP21においてエフェクトセットアツプダイアログ70をメイン画面30上に重ねて表示させる。

【0125】このときCPU20は、RAM22に格納されているその映像特殊効果処理についての各種データに基づいて、先行して設定された各種パラメータ値をそれぞれ対応する表示部77、80、81A~81C(図8)に表示し、かつ各種機能モードが設定されている場合には対応するチェックボックス91A~91C(図8)内にチェックマーク92を表示させる。

【0126】続いてCPU20は、ステップSP22に進んでこの後ステップSP22~ステップSP24において、エフェクトセットアツプダイアログ70のOKボ



タン 93B がクリックされたか否か、キャンセルボタン 93C がクリックされたか否か、及び他のボタン 93C、93D がクリックされ又はパラメータ値が入力されるなど、他の入力があったか否かを順次判断する。

【0127】そして CPU 20 は、ステップ SP 22 ～ステップ SP 24 の全てにおいて否定結果を得るとステップ SP 22 に戻り、この後これらステップ SP 22 ～ステップ SP 24 のいずれかにおいて肯定結果を得るまでステップ SP 22-SP 23-SP 24-SP 22 のループを繰り返す。

【0128】これに対して CPU 20 は、ステップ SP 22 において肯定結果を得ると、ステップ SP 25 に進んでそのエフェクトセットアップダイアログ 70 を用いて設定された各種パラメータ値と、各種機能モードの設定の有無などのデータを RAM 22 に取り込んだ後、ステップ SP 26 に進んでこのエフェクトセットアップダイアログ 70 をクローズさせ、この後ステップ SP 27 に進んでこの第 1 のエフェクトセットアップダイアログ処理手順 RT 1 を終了する。

【0129】また CPU 20 は、ステップ SP 23 において肯定結果を得るとステップ SP 26 に進み、これに対してステップ SP 24 において肯定結果を得ると、ステップ SP 28 に進んで対応する処理を実行した後ステップ SP 22 に戻る。

【0130】一方 CPU 20 は、編集リスト作成モード時において、例えばメイン画面 30 の編集リスト作成部 35 のエフェクトトラック 35D 上に表示されたエフェクトアイコン 63A ～63Y がダブルクリックされた場合には、図 11 に示す第 2 のエフェクトセットアップダイアログ処理手順 RT 3 に従って上述のような各種処理

を実行する。

【0131】すなわち CPU 20 は、メイン画面 30 の編集リスト作成部 35 のエフェクトトラック 35D 上に表示されたエフェクトアイコン 63A ～63Y がダブルクリックされるとこの第 2 のエフェクトセットアップダイアログ処理手順 RT 3 をステップ SP 30 において開始し、この後ステップ SP 31 ～ステップ SP 37 を第 1 のエフェクトセットアップダイアログ処理手順 RT 2

(図 10) のステップ SP 21 ～ステップ SP 26 及びステップ SP 28 と同様に順次処理する。

【0132】そして CPU 20 は、ステップ SP 36 においてエフェクトセットアップダイアログ 70 をクローズさせた場合には、ステップ SP 38 に進んでその映像特殊効果処理についてキーモードがオン設定されているか否かを判断する。

【0133】そして CPU 20 は、このステップ SP 38 において肯定結果を得ると、ステップ SP 39 に進んで対応するエフェクトアイコン 63A ～63Y の背景以外の部分の表示色をマゼンタに変えた後、ステップ SP 40 に進んでこの第 2 のエフェクトセットアップダイ

ログ処理手順 RT 3 を終了する。また CPU 20 は、ステップ SP 38 において否定結果を得ると、直接ステップ SP 40 に進んでこの第 2 のエフェクトセットアップダイアログ処理手順 RT 3 を終了する。

【0134】(5) 本実施の形態の動作及び効果

以上の構成において、この編集装置 1 では、編集リストの作成モード時、メイン画面 30 のセレクトエフェクトボタン 33R をクリックすることによりセレクトエフェクトダイアログ 62 をオープンさせることができ、このセレクトエフェクトダイアログ 62 内に表示されたエフェクトアイコン 63A ～63Y のうちの所望する映像特殊効果処理に対応するエフェクトアイコン 63A ～63Y をドラッグアンドドロップによりメイン画面 30 の編集リスト作成部 35 のエフェクトトラック 35D における所定位置に移動させて貼り付けるように表示させることによりその映像特殊効果処理を実行させるように設定することができる。

【0135】そしてこの場合この編集装置 1 では、メイン画面 30 及びセレクトエフェクトダイアログ 62 上において、トランジション系の映像特殊効果処理のエフェクトアイコン 63A ～63Y が青色で表示され、アニメーション系の映像特殊効果処理の各エフェクトアイコン 63A ～63Y がシアンで表示される。

【0136】またキーモードがオン設定された映像特殊効果処理については、対応するエフェクトアイコン 63A ～63Y を編集リスト作成部 35 のエフェクトトラック 35D 上にドロップした段階、又はエフェクトセットアップダイアログ 70 をクローズした段階において、対応するエフェクトアイコン 63A ～63Y がマゼンダで

表示される。

【0137】従ってこの編集装置 1 では、エフェクトアイコン 63A ～63Y の表示色に基づいてそのエフェクトアイコン 63A ～63Y に対応する映像特殊効果処理がトランジション系及びアニメーション系のいずれであるか、及びそのエフェクトアイコン 63A ～63Y に対応する映像特殊効果処理についてキーモードがオン設定されているか否かをオペレータが容易にかつ瞬時に判別でき、その分編集リストの作成作業をより容易化させることができる。

【0138】以上の構成によれば、メイン画面 30 及びセレクトエフェクトダイアログ 62 上において、トランジション系の映像特殊効果処理のエフェクトアイコン 63A ～63Y と、アニメーション系の映像特殊効果処理のエフェクトアイコン 63A ～63Y とをそれぞれ異なる所定色で表示するようにしたことにより、各エフェクトアイコン 63A ～63Y の色に基づいて対応する映像特殊効果処理がトランジション系及びアニメーション系のいずれであるかを容易にかつ瞬時に判別し得るようにすることができ、かくして編集リストの作成作業の作業効率を格段的に向上させ得る編集装置を実現できる。



【0139】またキーモードがオン設定された映像特殊効果処理については、対応するエフェクトアイコン63A～63Yを編集リスト作成部35のエフェクトトラック35D上にドロップした段階又はエフェクトセットアップダイアログ70をクローズした段階において対応するエフェクトアイコン63A～63Yを通常色と異なる警告色で表示するようにしたことにより、編集リスト作成部35のエフェクトトラック35Dにおけるエフェクトアイコン63A～63Yの表示色に基づいてキーモードがオン設定されているか否かを瞬時に判別し得るようにすることができ、かくして編集リストの作成作業の作業効率をより向上させ得る編集装置を実現できる。

#### 【0140】(6) 他の実施の形態

なお上述の実施の形態においては、本発明を図1のように構成された編集装置1に適用するようにした場合について述べたが、本発明はこれに限らず、登録された複数の映像素材を繋ぎ合わせて所望の編集映像を得るための編集内容を規定した編集リストを作成でき、当該編集リストの作成時には所望する映像特殊効果処理に対応するマークを編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定するようになされたこの他種々の構成の編集リスト作成装置に広く適用することができる。

【0141】また上述の実施の形態においては、編集リストにおいて設定された各映像特殊効果処理を認識し、識別するための各映像特殊効果処理毎に異なるマークとして、例えば図7のようなエフェクトアイコン63A～63Yを適用するようにした場合について述べたが、本発明はこれに限らず、この他種々の形態のマークを広く適用することができる。

【0142】さらに上述の実施の形態においては、編集リストを作成するための所定の編集リスト作成用画面(本実施の形態においてはメイン画面30)を表示する表示手段としてのディスプレイ12に、エフェクトアイコン63A～63Yを映像特殊効果処理の種類に応じた種類毎に異なる色で表示させる表示制御手段として、編集装置1全体の制御を司る主制御部3のCPU20を適用するようにした場合について述べたが、本発明はこれに限らず、このような表示制御手段をCPU20と別体に設けるようにしても良い。

【0143】さらに上述の実施の形態においては、映像特殊効果処理の種類をトラジション系及びアニメーション系の2つに分類し、これら2種類についてエフェクトアイコン63A～63Yを異なる表示色で表示するようにした場合について述べたが、本発明はこれに限らず、映像特殊効果処理の種類をトラジション系及びアニメーション系以外の分類法により複数種類に分類して、各種類毎に異なる表示色で表示するようにしても良い。またこの場合においても各種類の表示色を同系色に選定することによつて、各種類のエフェクトアイコンのイメージ

を近いものとすることができる。

【0144】さらに上述の実施の形態においては、トラジション系の映像特殊効果処理に対応するエフェクトアイコン63A～63Yを青色で表示し、アニメーション系に対応するエフェクトアイコン63A～63Yをシアンで表示するようにした場合について述べたが、本発明はこれに限らず、これら表示色としてはこれ以外の表示色を広く適用することができる。

【0145】さらに上述の実施の形態においては、編集リストを作成するための所定の編集リスト作成用画面(本実施の形態においてはメイン画面30)を表示する表示手段としてのディスプレイ12に、キーモードがオン設定された映像特殊効果処理について、対応するエフェクトアイコン63A～63Yを通常の表示色と異なる警告色で表示させる表示制御手段として編集装置1全体の制御を司る主制御部3のCPU20を適用するようにした場合について述べたが、本発明はこれに限らず、このような表示制御手段をCPU20と別体に設けるようにしても良い。

【0146】さらに上述の実施の形態においては、キーモードがオン設定された映像特殊効果処理について、対応するエフェクトアイコン63A～63Yを通常の表示色と異なる警告色で表示するようにした場合について述べたが、本発明はこれに限らず、キーモード以外の機能モードについても本発明を適用するようにしても良く、このようにしても上述の実施の形態と同様の効果を得ることができる。

【0147】さらに上述の実施の形態においては、キーモードがオン設定された映像特殊効果処理について、対応するエフェクトアイコン63A～63Yをメイン画面30の編集リスト作成部35のエフェクトトラック35D上に表示された段階において警告色で表示するようにした場合について述べたが、本発明はこれに限らず、エフェクトトラック35D以外の場所においても警告色で表示するようにしても良い。

【0148】さらに上述の実施の形態においては、キーモードがオン設定された映像特殊効果処理について、対応するエフェクトアイコン63A～63Yをトラジション系及びアニメーション系に関わりなくマゼンダで表示するようにした場合について述べたが、本発明はこれに限らず、マゼンダ以外の色で表示するようにしても良い。

【0149】またこの場合トラジション系及びアニメーション系毎に異なる警告色で表示するようにしても良く、この場合においてトラジション系及びアニメーション系の警告色をそれぞれトラジション系及びアニメーション系についての通常の表示色と同系色にすることによつて、キーモードがオン設定された映像特殊効果処理についてもメイン画面30の編集リスト作成部35のエフェクトトラック35D上においてトラジション系及びア

ニメーション系のいずれかを容易にかつ瞬時に判別し得るようにすることができる。

【0150】

【発明の効果】 以上のように本発明によれば、編集リストを作成でき、編集リストの作成時には所望する映像特殊効果処理に対応するマークを編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、当該マークを映像特殊効果処理の種類に応じた当該種類毎に異なる表示色で表示させる表示制御手段を設けるようにしたことにより、マークの表示色に基づいて対応する映像特殊効果処理の種類を容易かつ瞬時に判別し得るようにすることができ、かくして編集リストの作成作業の作業効率を格段的に向上させ得る編集リスト作成装置を実現できる。

【0151】 また編集リストを作成でき、編集リストの作成時には所望する映像特殊効果処理に対応するマークを編集リストにおける所定部位の所望位置に表示させるようにして当該映像特殊効果処理を実行するように設定する編集リスト作成装置において、所定の機能モードがオン設定された映像特殊効果処理について、対応するマークを通常の表示色と異なる警告色で表示させる表示制御手段を設けるようにしたことにより、マークの色に基づいて対応する映像特殊効果処理について所定の機能モードがオン設定されているか否かを容易にかつ瞬時に判別し得るようにすることができ、かくして編集リストの作成作業の作業効率を格段的に向上させ得る編集リスト作成装置を実現できる。

【図面の簡単な説明】

【図1】 本実施の形態による編集装置の全体構成を示すブロック図である。

【図2】 主制御部の構成を示すブロック図である。

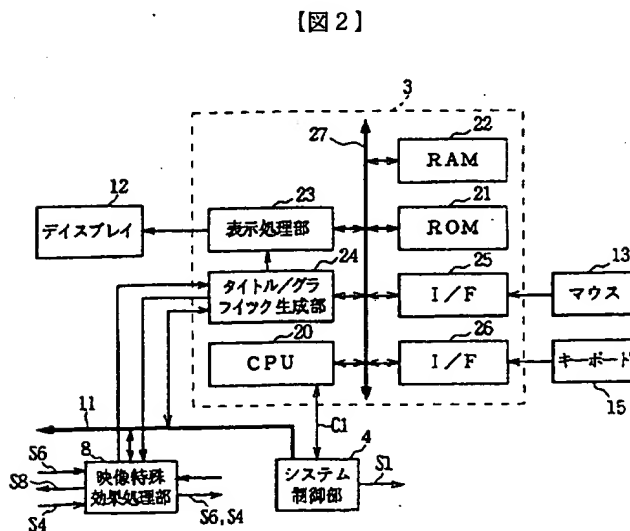


図2 主制御部の構成

【図3】 メイン画面を示す略線図である。

【図4】 ビデオクリップエディットダイアログを示す略線図である。

【図5】 メイン画面を示す略線図である。

【図6】 メイン画面を示す略線図である。

【図7】 セレクトエフェクトダイアログを示す略線図である。

【図8】 エフェクトセットアップダイアログを示す略線図である。

【図9】 セレクトエフェクトダイアログ処理手順を示すフローチャートである。

【図10】 第1のエフェクトセットアップダイアログ処理手順を示すフローチャートである。

【図11】 第2のエフェクトセットアップダイアログ処理手順を示すフローチャートである。

【図12】 従来の編集装置における編集リスト作成画面の一部構成例を示す略線図である。

【図13】 トランジション系及びアニメーション系の各映像特殊効果の説明に供する概念図である。

【符号の説明】

1 ……編集装置、3 ……主制御部、13 ……マウス、15 ……キーボード、20 ……CPU、22 ……RAM、30 ……メイン画面、35 ……編集リスト作成部、35A ……タイムスケール、35C、35E ……ビデオトラック、35D ……エフェクトトラック、60A～60D ……枠、62 ……セレクトエフェクトダイアログ、63A～63Y ……エフェクトアイコン、70 ……エフェクトセットアップダイアログ、RT1 ……セレクトエフェクトダイアログ、RT2 ……第1のエフェクトセットアップダイアログ処理手順、RT3 ……第2のエフェクトセットアップダイアログ処理手順。

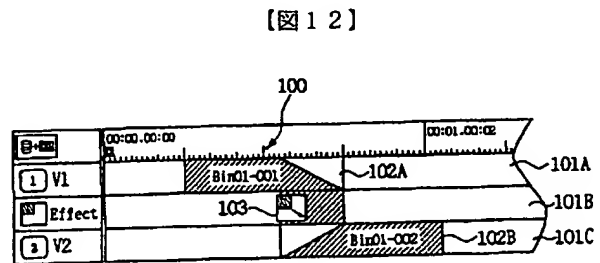


図12 従来の編集装置における編集リスト作成画面の一部構成例

【図 1】

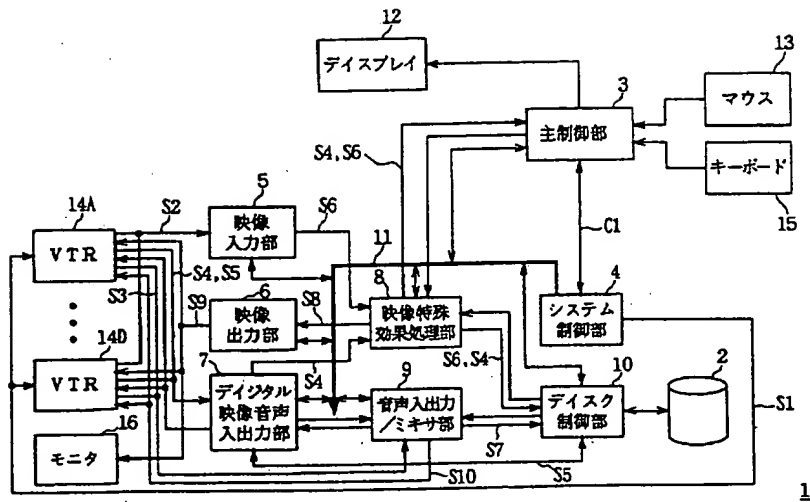


図 1 本実施の形態による編集装置の構成

【図 3】

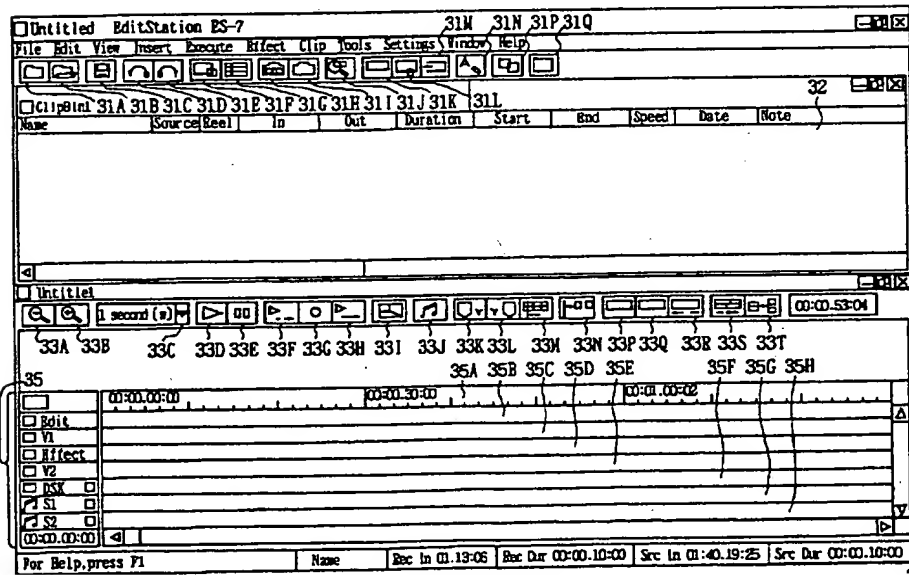


図 3 メイン画面 (1)

【図 4】

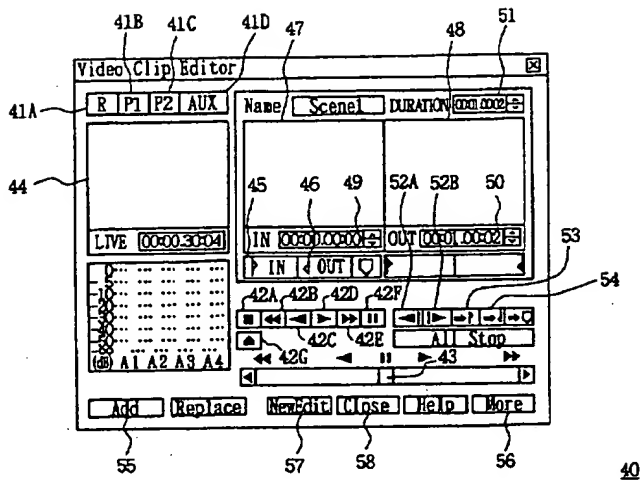
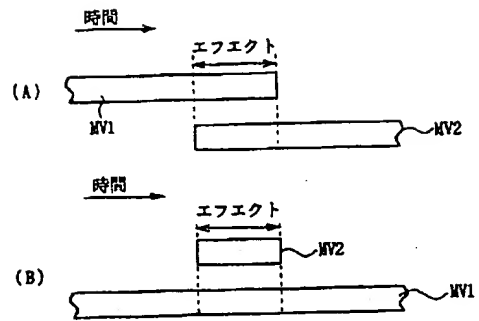


図 4 ビデオクリップエディットダイアログ

【図 13】

図 13 トランジション系及び  
アニメーション系の各映像特殊効果

【図 5】

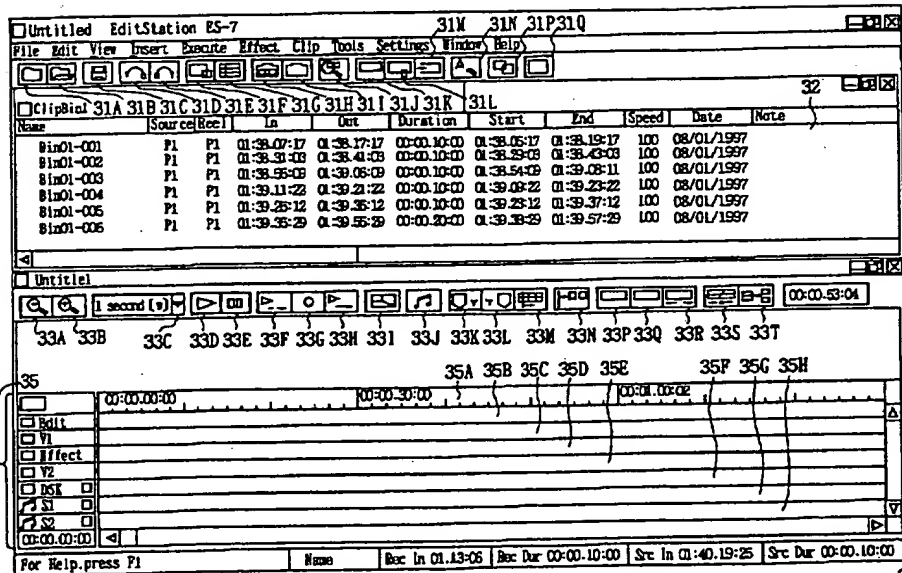


図 5 メイン画面 (2)

【図6】

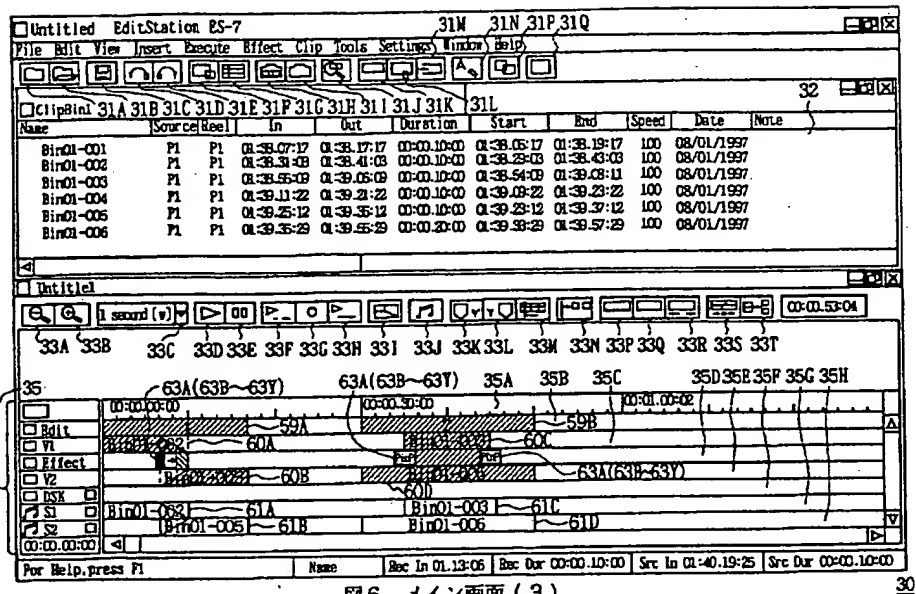


図6 メイン画面 (3)

【図7】

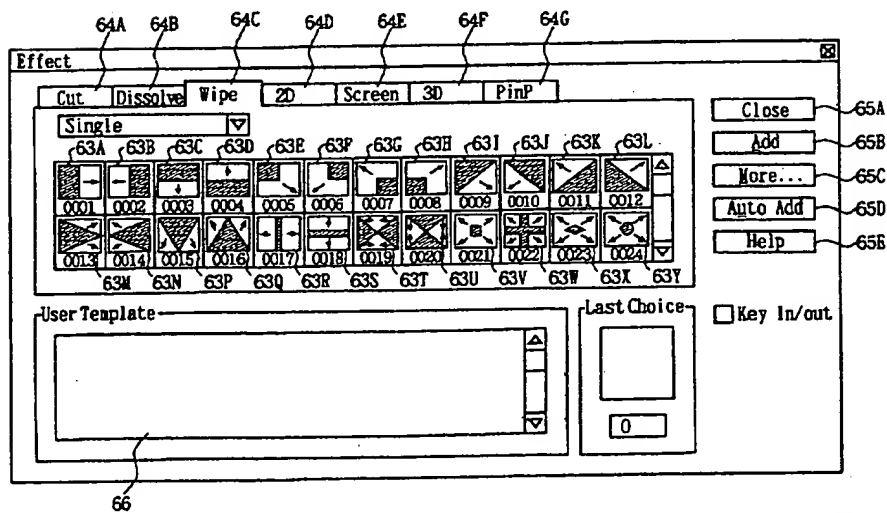


図7 セレクトエフェクトダイアログ

【図 8】

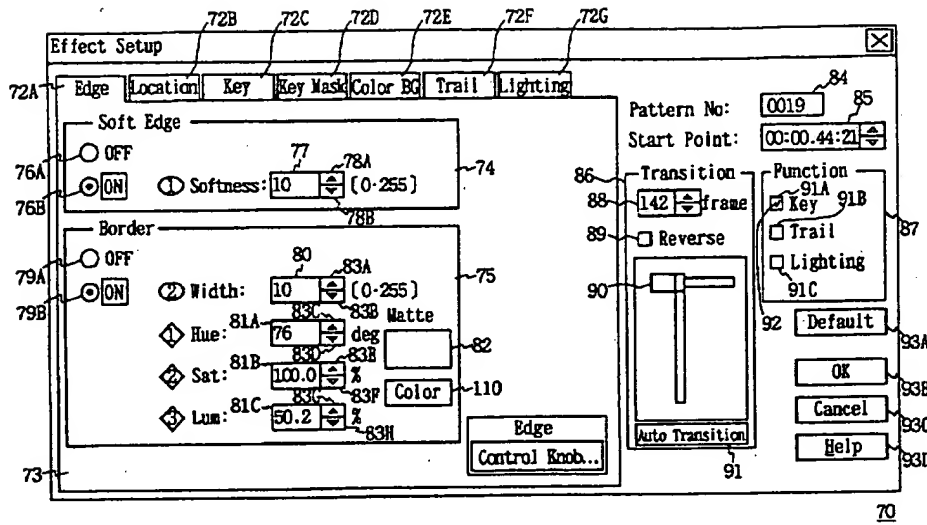


図 8 エフェクトセットアップダイアログ

【図 9】

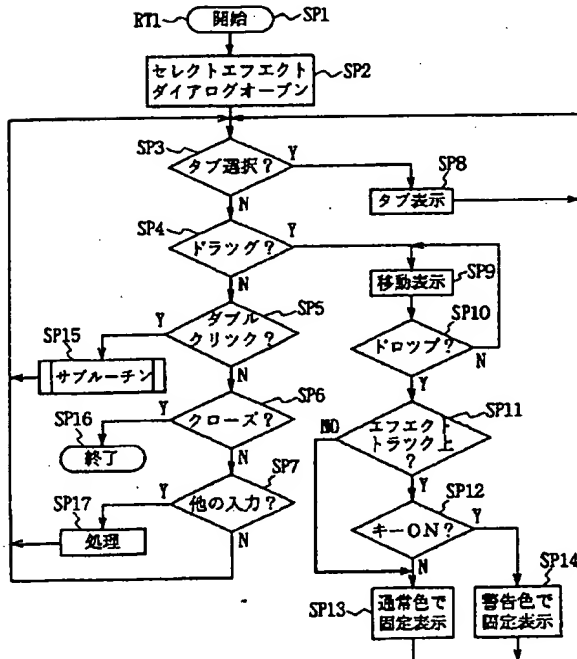


図 9 セレクトエフェクトダイアログ処理手順

【図 10】

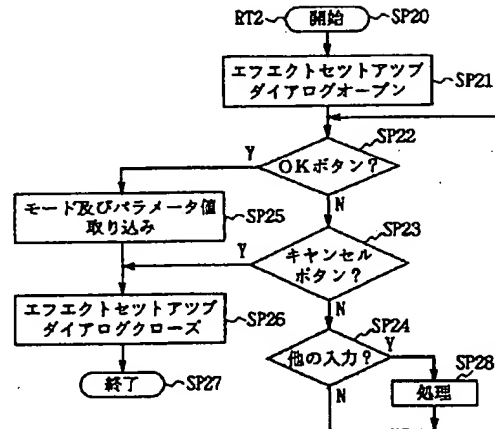


図 10 第1のエフェクトセットアップダイアログ処理手順

【図 11】

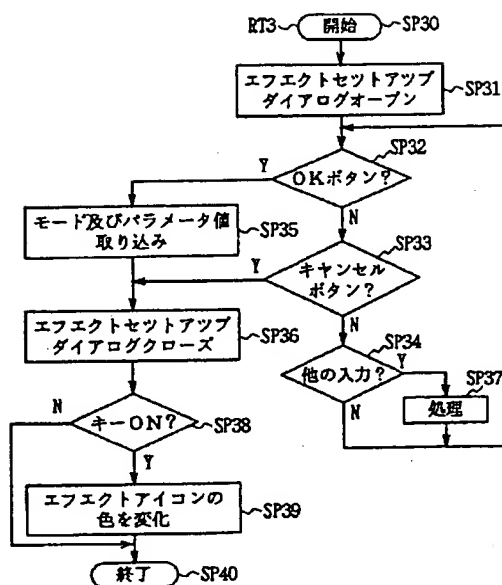


図 11 第2のエフェクトセットアップダイアログ処理手順

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